

TC-D709

SERVICE MANUAL

- TC-D709 is deck section in LBT-A67CD/A67CDM/D609CD.

*AEP Model
UK Model
E Model
Australian Model
Tourist Model*

TC-D709 is based on model TC-D707.

As only difference parts of TC-D709 in this service manual.

Refer to TC-D707 service manual previously issued for the other information.

DIFFERENCE PARTS LIST

| TC-D707 service manual | | | | TC-D709 |
|------------------------|----------|------------------------|---|---|
| Page | Ref. No. | Description | Part No. (Destination) | Part No. |
| 25 | 1 | LID (A) ASSY, CASSETTE | X-3364-983-1 (except for IT) X-3364-984-1 (IT) | X-3364-983-1 |
| | 2 | LID (B) ASSY, CASSETTE | X-3364-985-1 (except for IT) X-3364-986-1 (IT) | X-3366-401-1 |
| | 10 | CASE | *4-939-803-31 (except for IT) *4-939-803-71 (IT) | *4-939-803-31 |
| | 11 | PANEL, BACK | *3-377-136-51 (except for G) *3-377-136-61 (G) | *3-387-099-31 (except for G) *3-387-099-42 (G) |
| 26 | 51 | PANEL ASSY, FRONT | X-3364-708-1 (except for IT) X-3364-709-1 (IT) | X-3364-708-1 |
| | 55 | KNOB (SLIDE) | *3-377-120-01 (except for IT) *3-377-120-11 (IT) | *3-377-120-01 |

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

STEREO CASSETTE DECK
SONY®

TC-D707

SERVICE MANUAL

*AEP Model
UK Model
E Model
Australian Model*



• This set is the cassette deck section in LBT-D707CD/D707CDM.

| Model Name Using Similar Mechanism | | TC-H1600/WR590 |
|------------------------------------|--------|----------------|
| Tape Transport Mechanism Type | DECK A | TCM-190RA12C |
| | DECK B | TCM-190RB12C |

SPECIFICATIONS


| | |
|--------------------|--|
| Recording system | 4-track 2-channel stereo |
| Frequency response | DOLBY NR OFF With Type IV cassette (Sony METAL-ES) 30 Hz to 15 kHz (± 3 dB) With Type II cassette (Sony UX-S) 40 Hz to 14 kHz (± 3 dB) With Type I cassette (Sony HF-S) 40 Hz to 14 kHz (± 3 dB) |
| Wow and flutter | $\pm 0.2\%$ W.PEAK (DIN) |
| Weight | Approx. 3.5 kg (8 lb 1 oz) |
| Dimensions | Approx. 355 x 131 x 304 mm (14 x 5 1/4 x 12 inches) (w/h/d, including projections) |

Design and specifications are subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.

"DOLBY", the double-D symbol  and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.





STEREO CASSETTE DECK
SONY®

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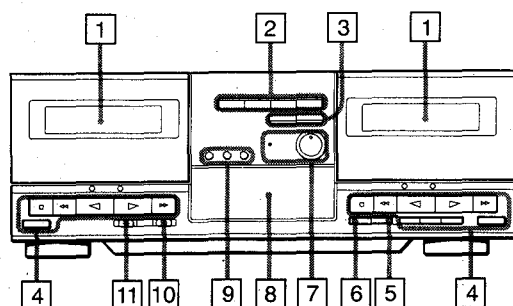
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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1 GENERAL

This section is extracted
from instruction manual.



- 1 Cassette holders
- 2 AUTO CD SYNCHRO REC buttons and indicators
C.(Cross) FADE (29)
FADE (28)
EDIT (31)
TIME (31)
- 3 SYNCHRO DUBBING buttons (24)
- 4 Tape operation buttons
◀◀ Leftward fast winding/AMS*, ▶▶ Rightward fast winding/AMS*, ▶ Forward play, ◀ Reverse play, ■ Stop, ▲ EJECT, || PAUSE (deck B only), ○ REC MUTE Record muting (deck B only), ● REC Record (deck B only)
- 5 FADER button (22)
- 6 ARL (Automatic recording level) button and indicator (21)
- 7 REC (recording) LEVEL control and indicator (20)
- 8 Display window
- 9 COUNTER setting buttons (19)
A/B, MEMORY and RESET button
- 10 DOLBY NR (noise reduction) selector (20)
- 11 DIRECTION MODE selector (17, 20, 24)

* AMS is the abbreviation of Automatic Music Sensor.

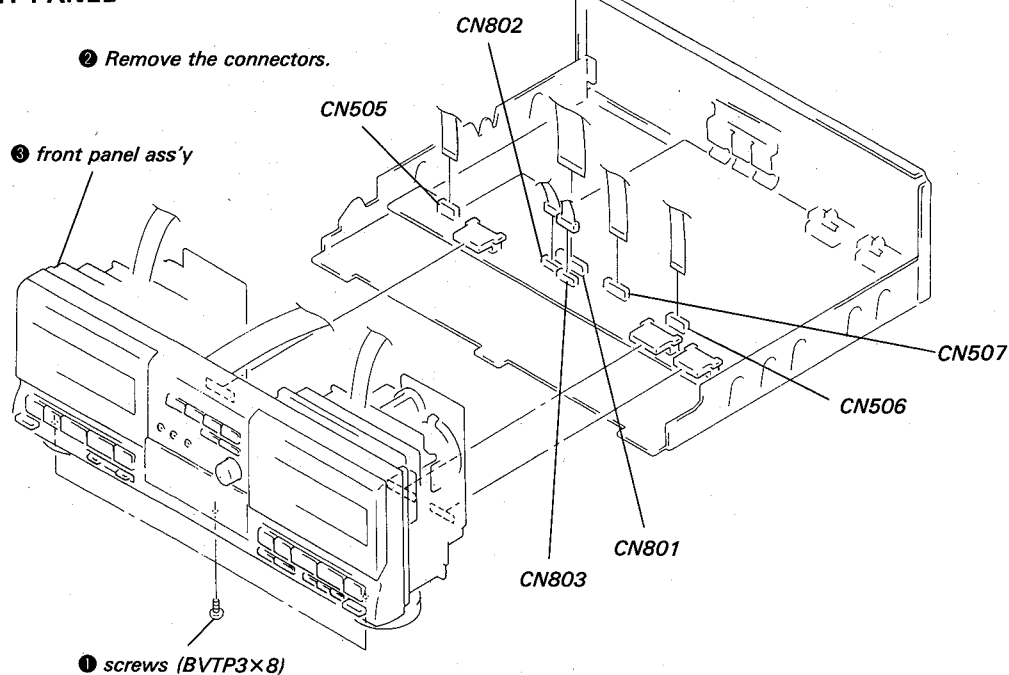
SECTION 2 DISASSEMBLY

NOTE: Follow the disassembly procedure in the numerical order given.

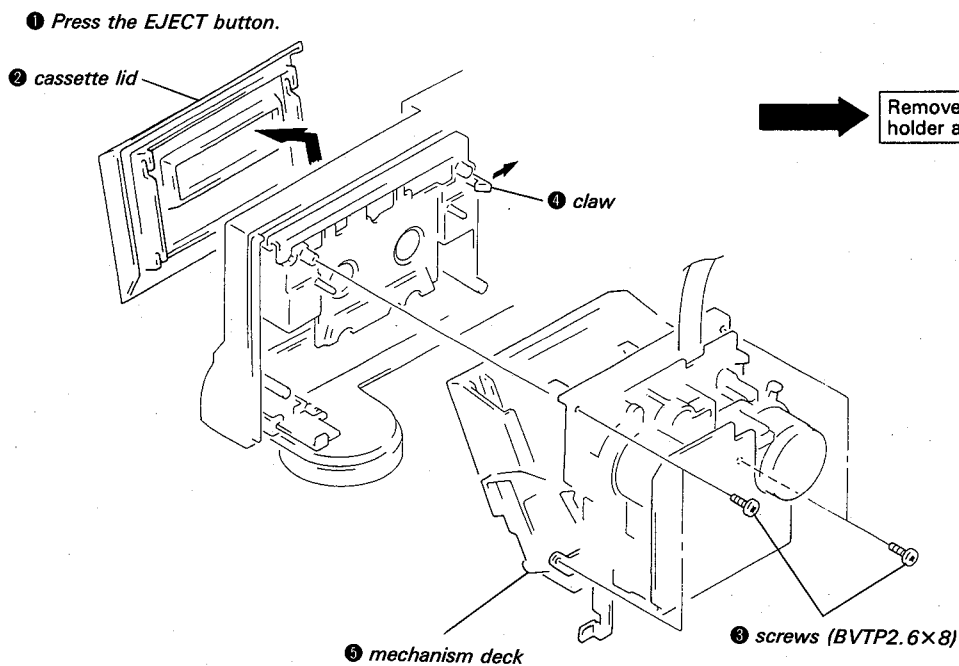
CASE

Unscrew the four case attachment screws M3×8 and remove the case.

FRONT PANEL

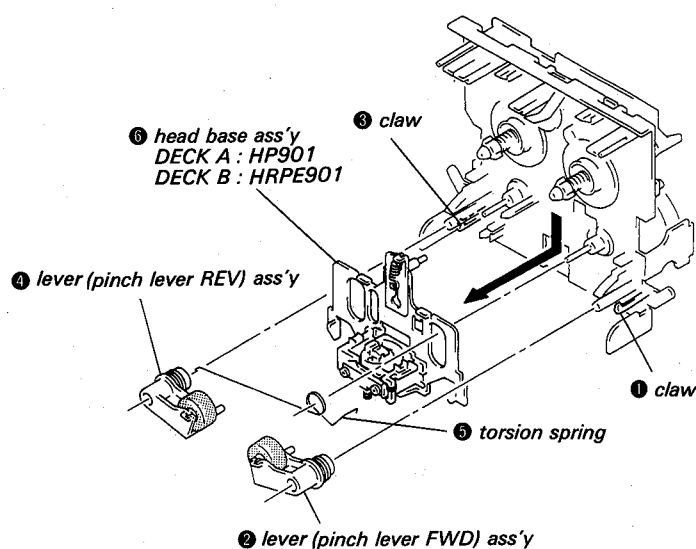


MECHANISM DECK

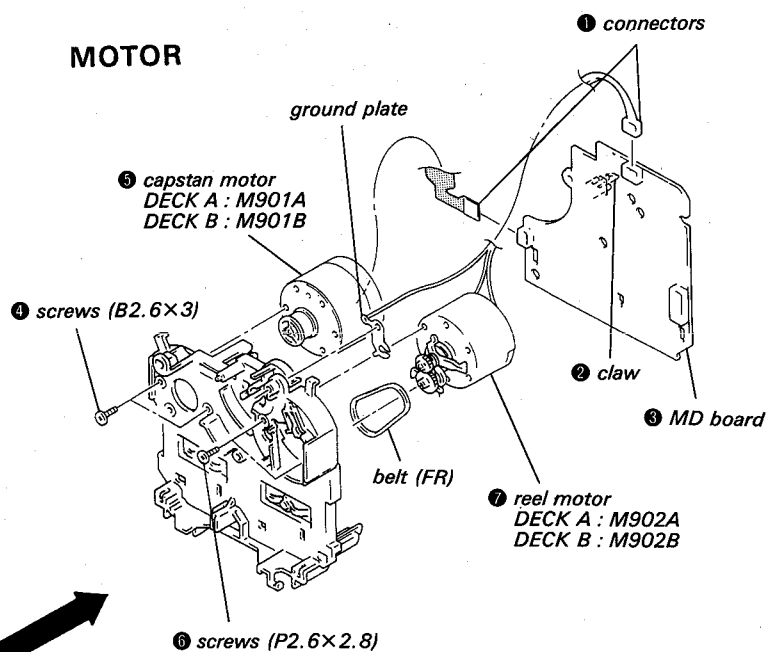


Remove the cassette holder assembly.

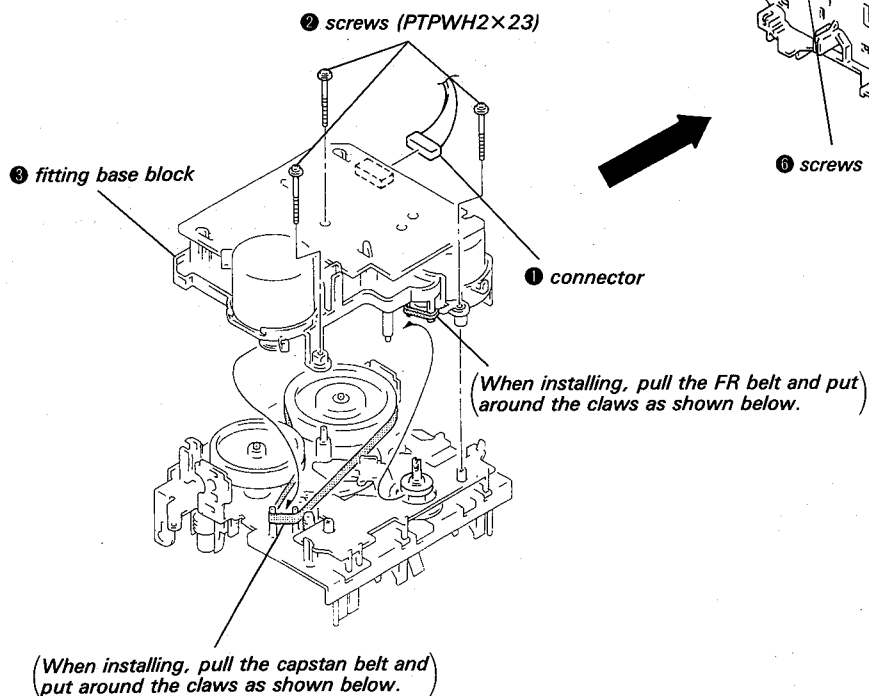
HEAD



MOTOR



FITTING BASE BLOCK



SECTION 3 ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

- Clean the following parts with a denatured-alcoholmoistened swab;

| | |
|----------------------------|--------------|
| record/playback/erase head | |
| pinch roller | rubber belts |
| capstan | idler |
- Demagnetize the record/playback head with a head demagnetizer.
(Head demagnetizer do not approach for the erase head.)
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed in the rated power supply voltage unless otherwise noted.

Torque Measurement

| Torque | Torque meter | Meter reading |
|---------------------|--------------|---|
| FWD | CQ-102C | 35 to 60g · cm (0.49 to 0.83 oz · inch) |
| FWD Back tension | CQ-102C | 2 to 6g · cm (0.03 to 0.08 oz · inch) |
| REV | CQ-102RC | 35 to 60g · cm (0.49 to 0.83 oz · inch) |
| REV Back tension | CQ-102RC | 2 to 6g · cm (0.03 to 0.08 oz · inch) |
| FF, REW | CQ-201B | 70 to 110g · cm (0.98 to 1.52 oz · inch) |

3-2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in the service manual. As a rule, adjustment about playback should be performed before adjustment about recording. The adjustments should be performed for both L-CH and R-CH.

● Test Mode

The Test mode is activated by shorting Test Point Service mode (IC805 34 pin changes over to "L") with the POWER switch in OFF position, then turning on the POWER switch.

In this mode, the following functions operate:

- Source monitor

Line mute is cancelled during recording.

- High speed playback

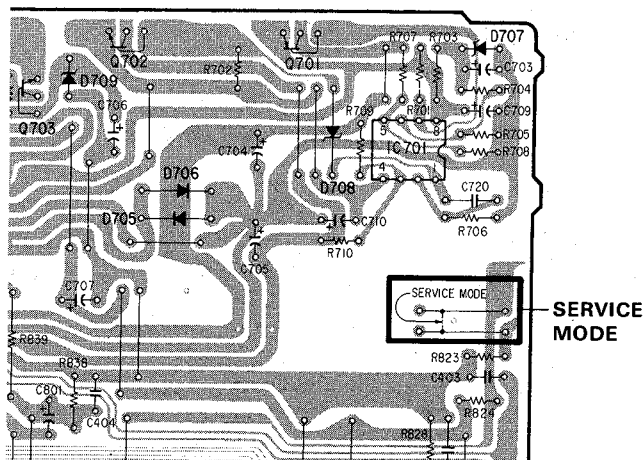
High speed playback is executed when the HIGH SPEED (DUBBING) button is pressed during playback. Normal speed playback is restored when the button is pressed again.

- Record memory

The tape counter is reset to "0" at the record start point.

After adjustment, open the Service mode to cancel the Test mode.

[MAIN BOARD] (CONDUCTOR SIDE)



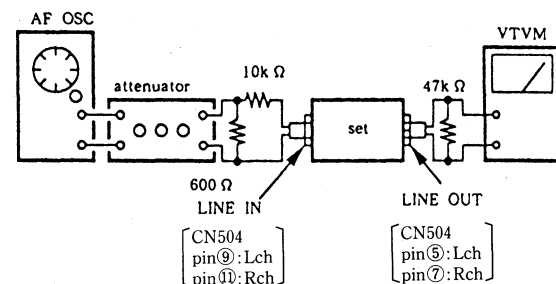
- Switches and controls should be set as follows unless otherwise specified.

NR switch : OFF
DIR MODE switch : \rightarrow

Standard Record:

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Record Mode



Standard Input Level

| | |
|------------------|---------------|
| input terminal | LINE IN |
| source impedance | 10kΩ |
| input level | 0.25V (-10dB) |

Standard Output Level

| | |
|-----------------|--------------|
| output terminal | LINE OUT |
| load impedance | 47kΩ |
| output level | 0.44V (-5dB) |

Test tape

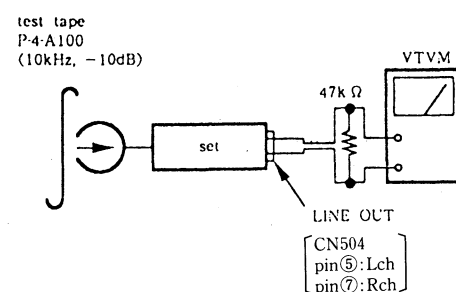
| Type | Signal | Used for |
|----------|--------------|-----------------------|
| P-4-A100 | 10kHz, -10dB | Azimuth Adjustment |
| P-4-L300 | 315Hz, 0dB | PB Level Adjustment |
| WS-48B | 3kHz, 0dB | Tape Speed Adjustment |

Record/Playback Head Azimuth Adjustment

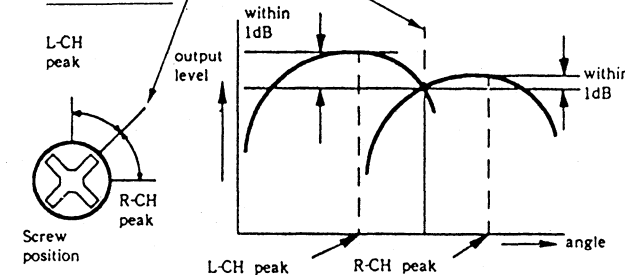
DECK A DECK B

Procedure:

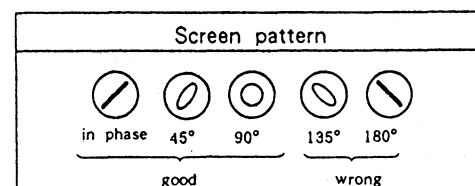
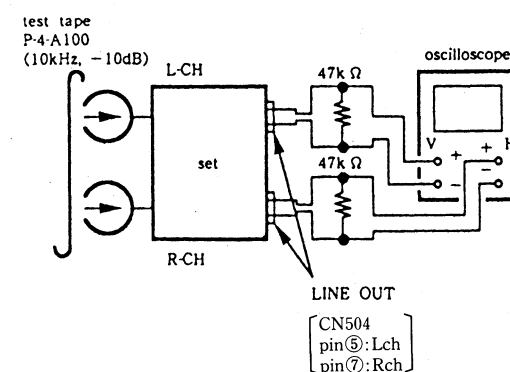
- Mode: FWD playback



- Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.

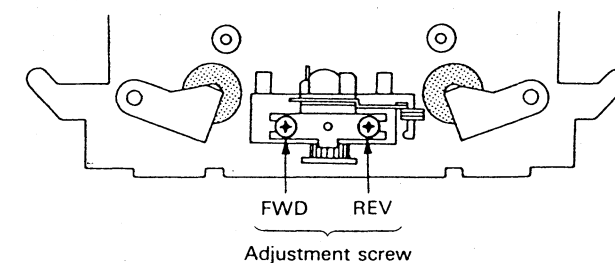


- Phase Check
Mode: playback



- Set in the REV mode and repeat the step 1-3.
- After the adjustment, lock the screws with locking compound.

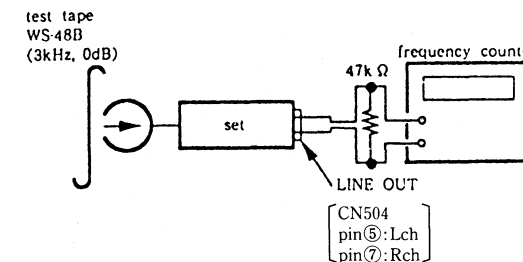
Adjustment Location : Record/playback head



Tape Speed Adjustment DECK A DECK B

Procedure :

Mode: playback



Perform high speed adjustment before normal speed adjustment.

(High speed adjustment)

- Continue pressing the SYNCHRO DUBBING HIGH SPEED switch.
- Check that frequency counter reading is within the standard value $6,000 \pm 60\text{Hz}$.
- If out of the standard, adjust each RV72 so that the frequency counter reading satisfies $6,000 \pm 60\text{Hz}$ on both A and B decks.
- Change over to Rev playback status, and repeat the above steps 1 to 3.

(Normal speed adjustment)

- Continue pressing the SYNCHRO DUBBING NORM SPEED switch.
- Check that the frequency counter reading is within the standard value $3,000 \pm 30\text{Hz}$.
- If out of the standard, adjust each RV71 so that the frequency counter reading satisfies $3,000 \pm 30\text{Hz}$ on both A and B decks.
- Change over to REV playback status, and repeat the above steps 1 to 3.

Frequency difference between the beginning and the end of the tape should be within 3%.

Frequency difference between deck A and deck B the beginning of the tape should be within 1.0%.

Adjustment Location :

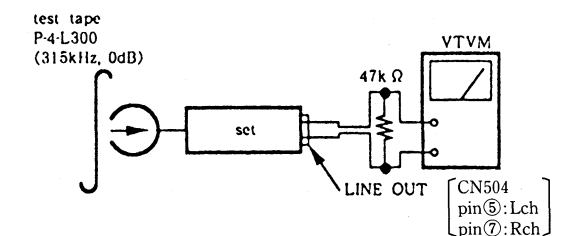
MD-A, MD-HX board

Playback Level Adjustment

DECK A DECK B

Procedure :

Mode: playback



Adjust RV11 (L-CH), RV21 (R-CH) so that the reading on VTVM meets the adjustment limits below.

Adjustment Limits :

LINE OUT level: $-5 \pm 0.5\text{dB}$ (0.42-0.46V)

Level difference between channels: less than 0.5dB

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

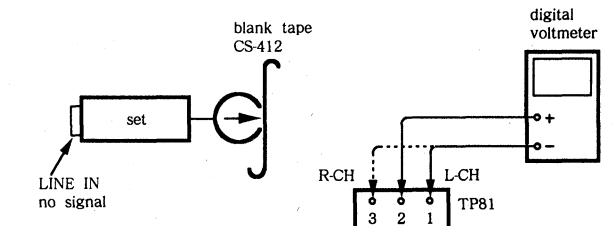
Adjustment Location : MD-A, MD-HX board

Bias Consumption Current Adjustment

This adjustment should be performed when replacing the head assy or the bias oscillating transformer (T81,T91).

Procedure :

() : R-CH



- Connect the digital voltmeter to test point TP81.
- Set RV81 (RV91) to mechanical center.
- Set to FWD record mode.
- Adjust T81 (T91) so that the digital voltmeter reading becomes minimum.

Adjustment Location : MD-HX board

Record Bias Adjustment DECK B

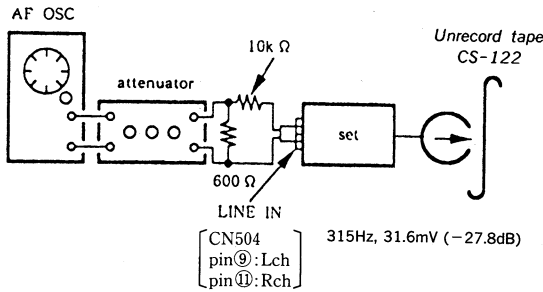
Setting :

REC LEVEL control : Standard Record (See page 7).

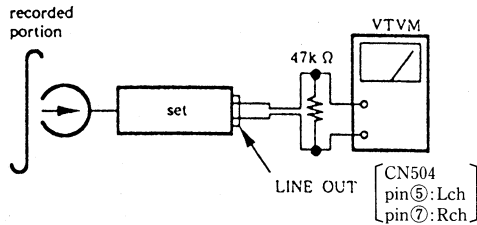
4-1. CIRCUIT BOARDS LOCATION

Procedure :

1. Mode : record



2. Mode : playback



Playback the signal recorded in step 1.
Confirm that the 10kHz playback output is $0 \pm 0.5\text{dB}$ relative to the 315Hz output. If necessary, adjust RV 81 (L-CH), RV 91 (R-CH) and repeat the steps given above.

Adjustment Location : MD-HX board

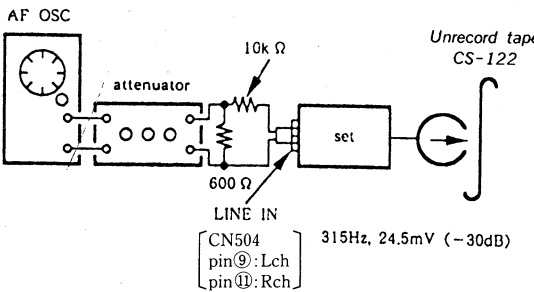
Record Level Adjustment **DECK B**

Setting :

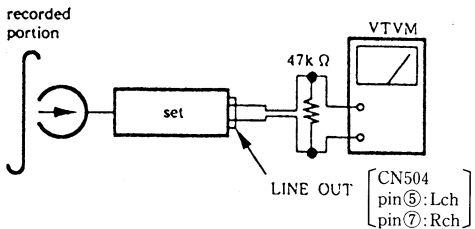
REC LEVEL control : Standard Record (See page 7).

Procedure :

1. Mode: record



2. Mode: playback



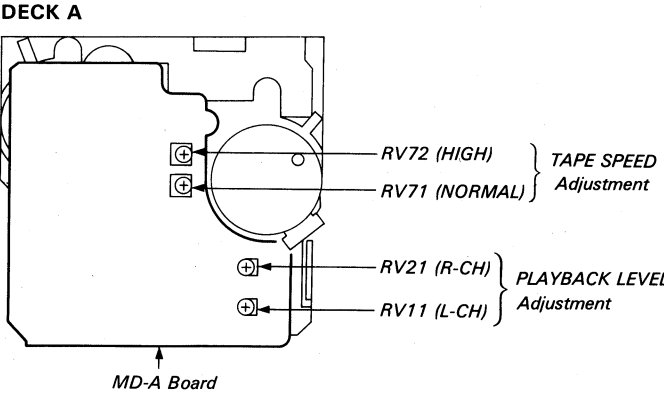
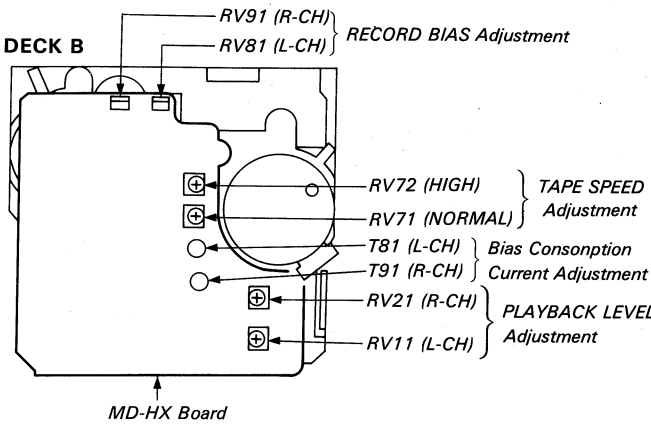
3. Playback the signal recorded in step 1.

Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat the step 1-2.

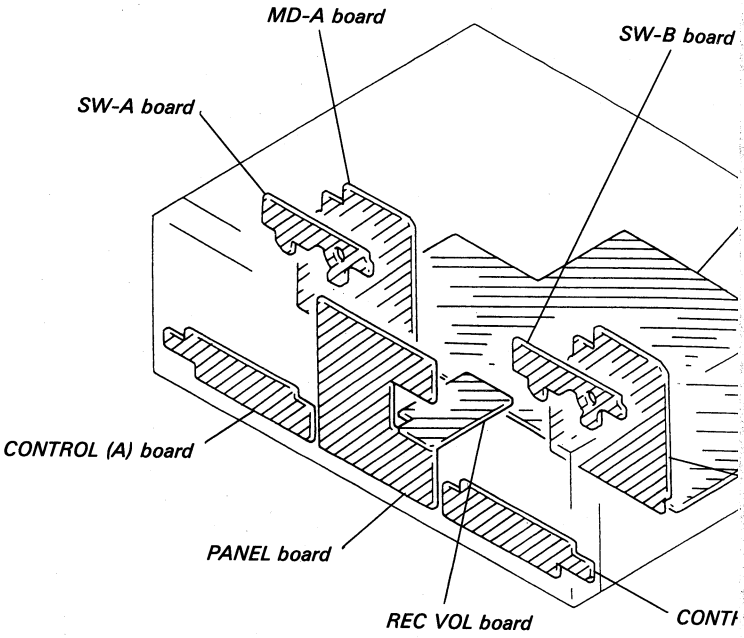
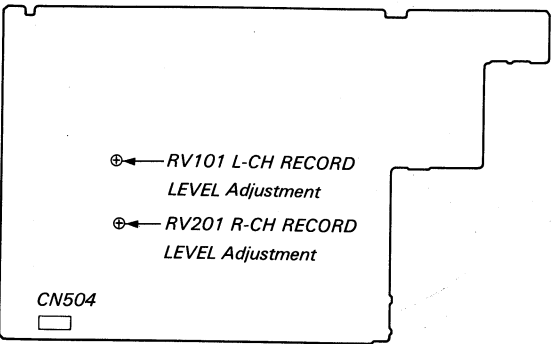
Adjustment Limits : $-27.7\text{dB} \pm 0.5\text{dB}$ (30.2—33.8mV)

Adjustment Location : MAIN board (component side)

— Adjustment Parts Location Diagrams —

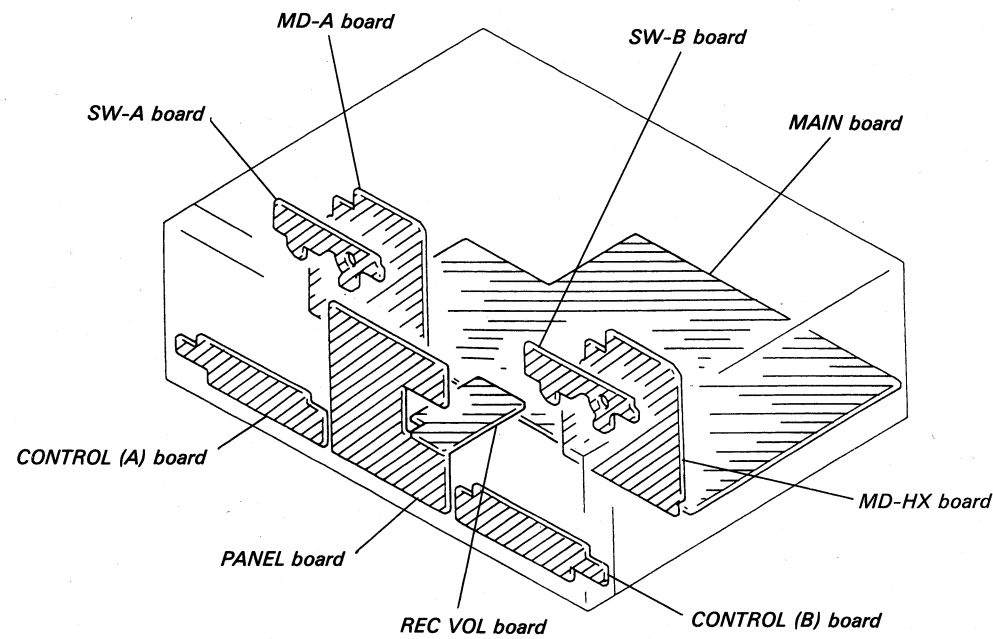


MAIN BOARD (COMPONENT SIDE)



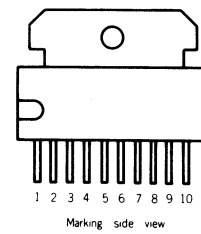
SECTION 4 DIAGRAMS

CIRCUIT BOARDS LOCATION

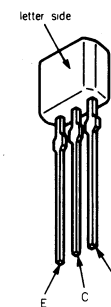


4-2. SEMICONDUCTOR LEAD LAYOUTS

TA7272P



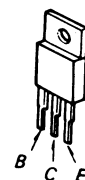
2SA1175-HFE
DTC144ES



2SB1013-4



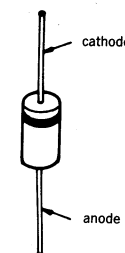
2SB1094-LK
2SD2012



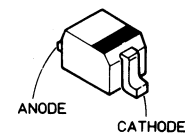
2SC2603-EF
2SC3622A-LK
DTA114ES
DTA144ES
DTC114ES
DTC143TS



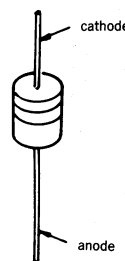
1N4148M
10E2N



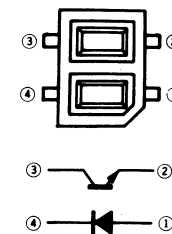
1SS352



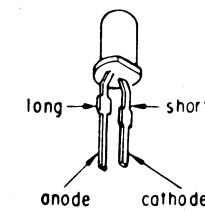
HZS6A1L
HZS9A2L
UZL-7L2



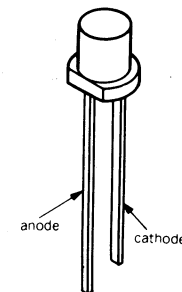
NJL5165K-B



SEL2210S-C



SEL2213C-C



4-3. PRINTED WIRING BOARDS -MAIN Section-

• See page 10, 11 Circuit boards location and Semiconductor lead layouts.

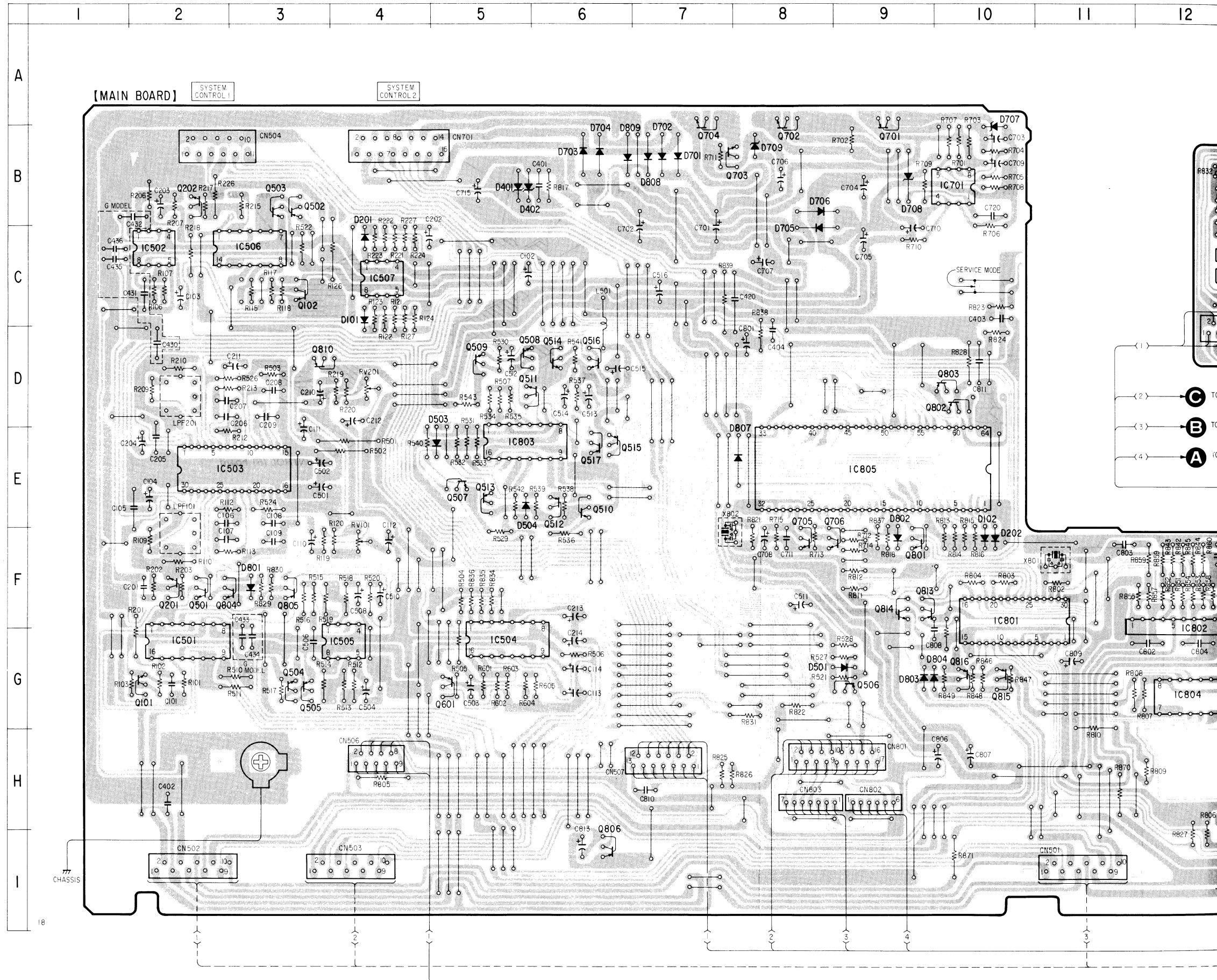
● Semiconductor Location

| Ref. No. | Location | Ref. No. | Location |
|-------------|----------|------------|----------|
| D31 | G-23 | Q51 | F-24 |
| D101 | C-4 | Q52 | F-25 |
| D102 | F-10 | Q53 | F-24 |
| D201 | C-4 | Q71(MD-A) | G-19 |
| D202 | F-10 | Q71(MD-HX) | G-26 |
| D401 | B-5 | Q101 | G-2 |
| D402 | B-5 | Q102 | C-3 |
| D501 | G-9 | Q201 | F-2 |
| D503 | E-5 | Q202 | B-2 |
| D504 | E-5 | Q501 | F-2 |
| D701 | B-7 | Q502 | B-3 |
| D702 | B-7 | Q503 | B-3 |
| D703 | B-6 | Q504 | G-3 |
| D704 | B-6 | Q505 | G-3 |
| D705 | B-8 | Q506 | G-9 |
| D706 | B-8 | Q507 | E-5 |
| D707 | B-10 | Q508 | D-5 |
| D708 | B-9 | Q509 | D-5 |
| D709 | B-8 | Q510 | E-6 |
| D801 | F-3 | Q511 | D-6 |
| D802 | F-9 | Q512 | E-9 |
| D803 | G-9 | Q513 | E-5 |
| D804 | G-10 | Q514 | D-6 |
| D805 | B-12 | Q515 | E-6 |
| D806 | B-12 | Q516 | D-6 |
| D807 | E-8 | Q601 | G-5 |
| D808 | B-7 | Q701 | A-9 |
| D809 | B-6 | Q702 | A-8 |
| | | Q703 | B-8 |
| | | Q704 | A-7 |
| IC31(MD-A) | G-17 | Q705 | F-8 |
| IC31(MD-HX) | G-25 | Q706 | F-9 |
| IC81(SW-A) | C-22 | Q801 | F-9 |
| IC81(SW-HX) | F-25 | Q802 | D-10 |
| IC501 | G-2 | Q803 | D-10 |
| IC502 | C-2 | Q804 | F-3 |
| IC503 | E-3 | Q805 | F-3 |
| IC504 | G-5 | Q806 | I-6 |
| IC505 | G-4 | Q807 | B-12 |
| IC506 | C-3 | Q808 | B-12 |
| IC507 | C-4 | Q810 | D-3 |
| IC701 | B-10 | Q813 | F-9 |
| IC801 | F-10 | Q814 | F-9 |
| IC802 | F-12 | Q815 | G-10 |
| IC803 | E-5 | Q816 | G-10 |
| IC804 | G-12 | | |
| IC805 | E-9 | | |
| IC806 | B-12 | | |

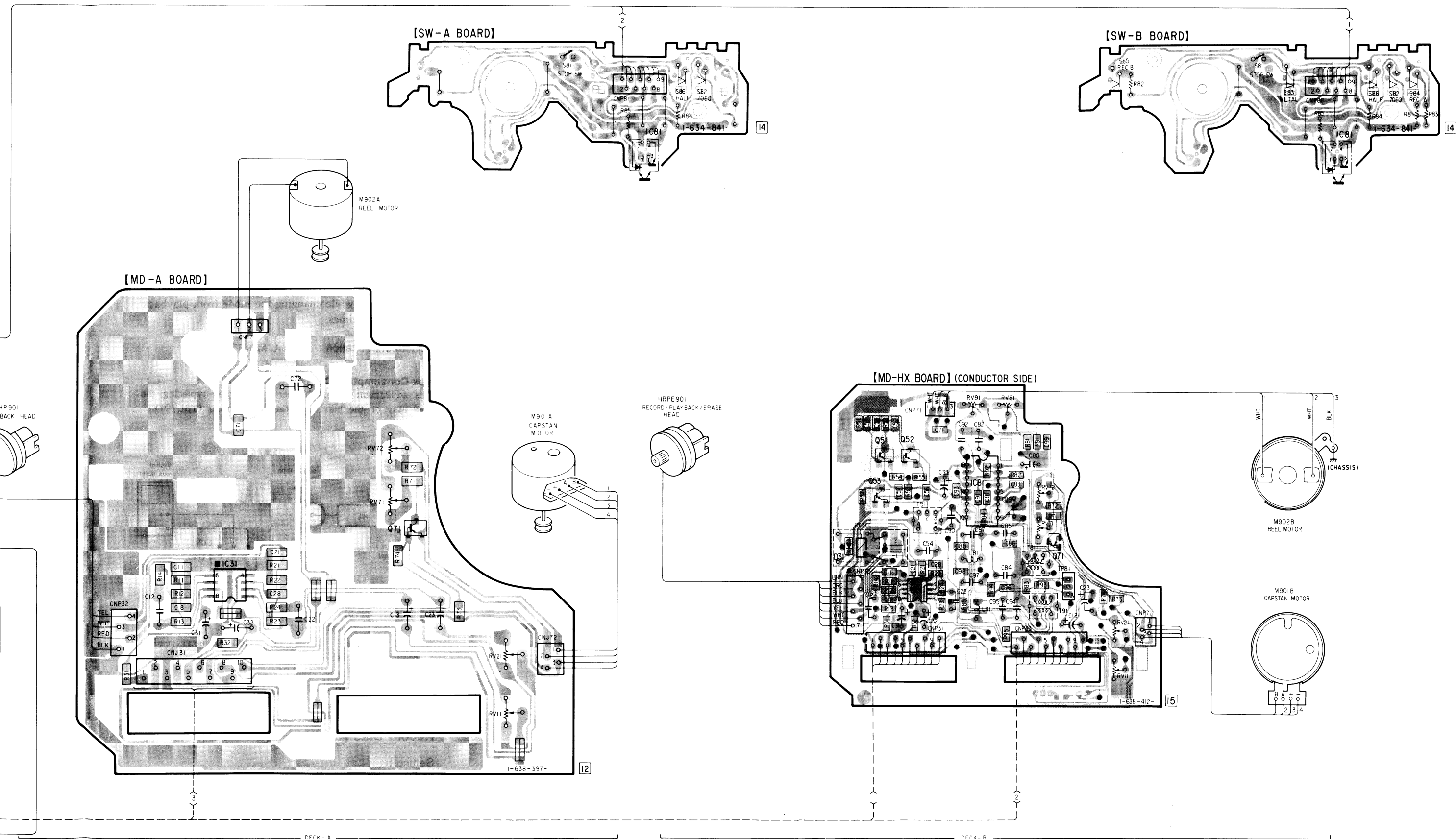
Note:

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : Through hole.
- ▨ : Pattern on the side which is seen.
- ▧ : Pattern of the rear side.

G: Germany







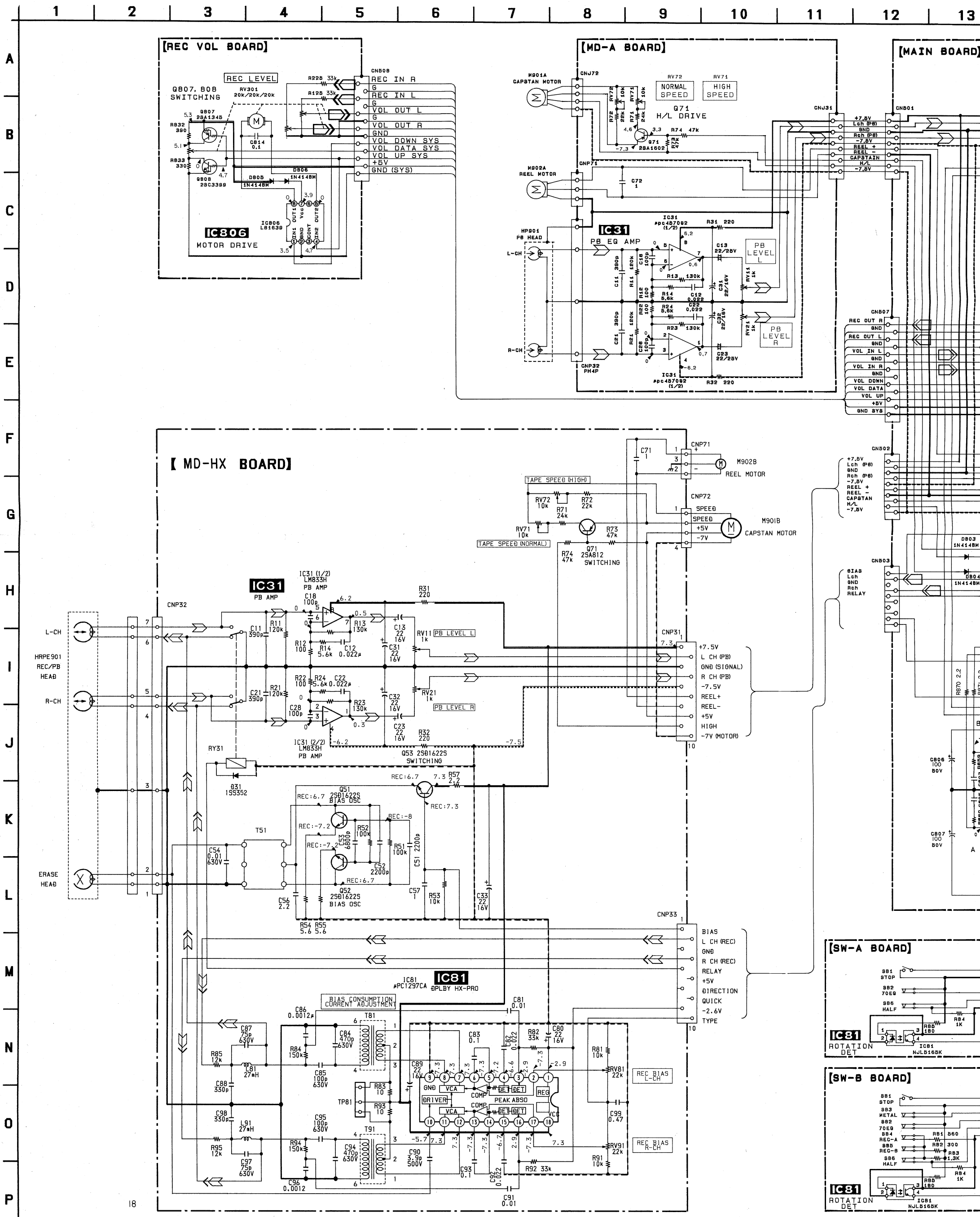
4-4. SCHEMATIC DIAGRAMS -MAIN Section-

- See page 21 for IC Block Diagrams.

Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- \triangle : internal component.
- \square : nonflammable resistor.
- : B+ Line
- - - : B- Line
- \square : adjustment for repair.

- Voltage is dc with resp under no-signal (detuned) no mark: REC
- Voltages are taken with a Voltage variations may tion tolerances.
- Signal path.
- \square : PB (DECK A)
- \square : PB (DECK B)
- \square : REC (DECK B)
- G: Germany



unless otherwise

- G: Germany

【MAIN BOARD】

IC501

Q101, 201, 501
EQ SWITCH

IC502

PASS AMP

IC503

DOLBY AMPL



503
BY AMP

IC504
REC EQ

Q601
TYPE1 REG
EQ SWITCH

IC507
METER AMP

IC701
POWER
+7.5V REG

IC805
CONTROL

IC804
COMPARATOR

Q802, 803
LINE MUTE

Q801
SWITCHING

Q705, 706
RESET

LINEOUT (L)
LINEOUT (R)
REC IN (L)
REC IN (R)

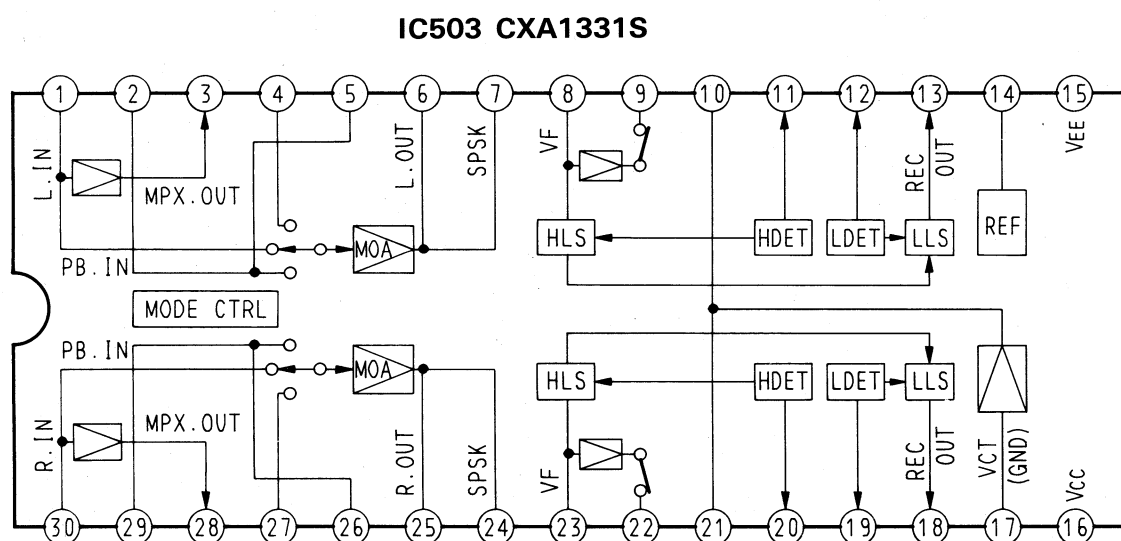
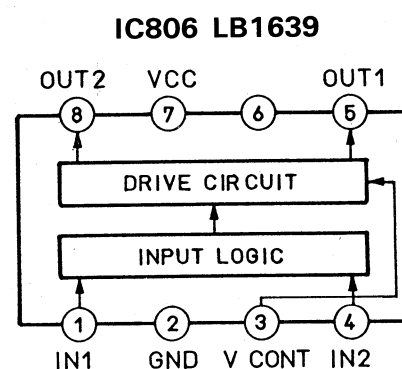
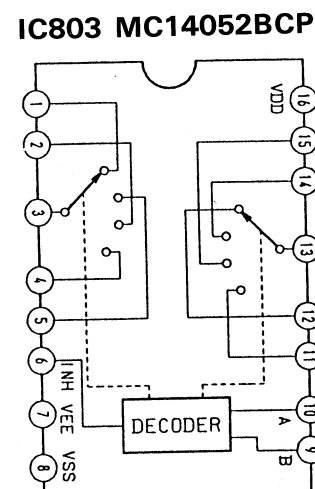
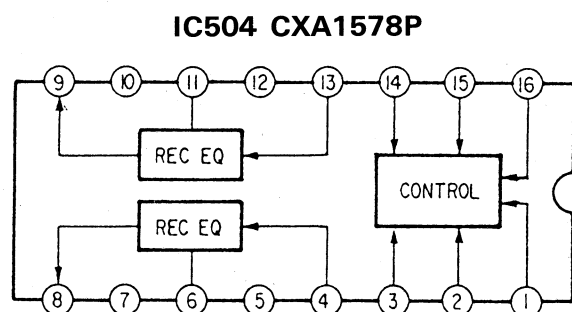
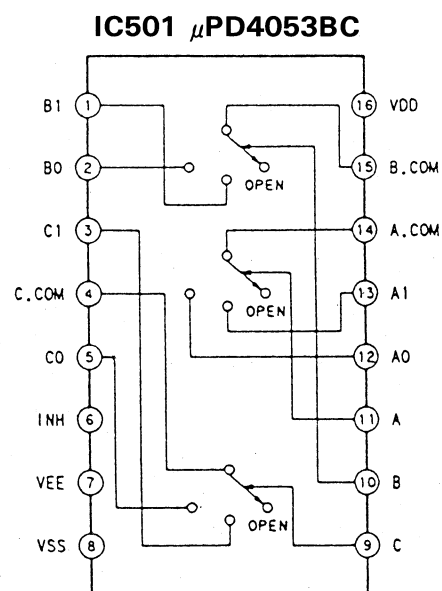
CD ON/OFF
NC
SYS.BND
NC
VF
VF
NC
NC
AU BUS
BUS BND
AC
AC CT
AC
CONNECTION

< KEY3
> A KEY
< KEY2
> B KEY
< A KEY
> A KEY
BAF LED
BND (SYS)
F1
V8 (VD18P)
F2
BND (SYS)
REBET
+8V
B1 SYNC
B2 DATA
B3 CLOCK

BND (SYS)
< A KEY
> A KEY
BAF LED
>REBET (PANEL)
< NDUB (PANEL)
KEY4

BND (SYS)
< A KEY
> A KEY
BAF LED
>REBET (PANEL)
< NDUB (PANEL)
KEY4

- **IC Block Diagrams**

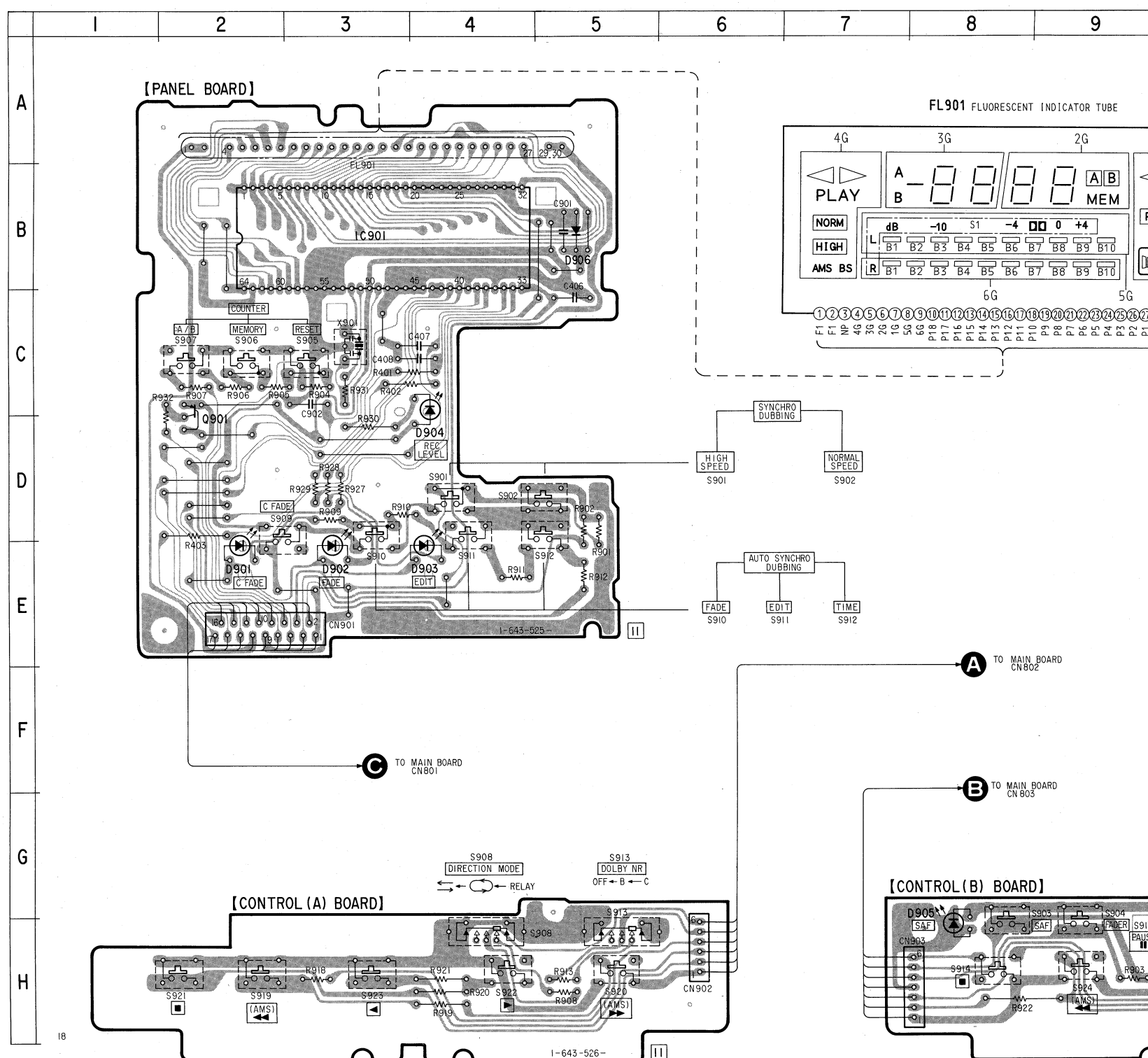


4-5. PRINTED WIRING BOARDS –PANEL Section–

- See page 10, 11 Circuit boards location and Semiconductor lead layouts.

● Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| D901 | E-2 |
| D902 | E-3 |
| D903 | E-4 |
| D904 | D-4 |
| D905 | H-8 |
| D906 | B-5 |
| IC901 | B-3 |
| Q901 | D-2 |

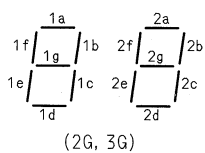
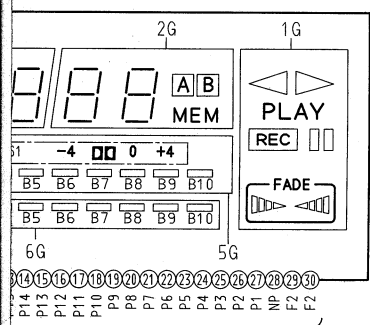


Note:

- ○ — : parts extracted from the component side.
- ■ : Pattern on the side which is seen.

| | | | | | |
|--|--|---|----|----|----|
| | | 9 | 10 | 11 | 12 |
|--|--|---|----|----|----|

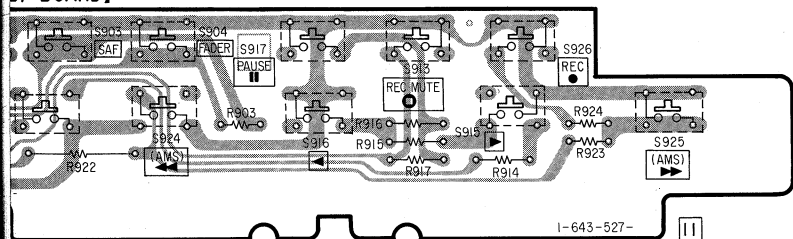
FLUORESCENT INDICATOR TUBE



A TO MAIN BOARD
CN 802

B TO MAIN BOARD
CN 803

B) BOARD]



4-6. SCHEMATIC DIAGRAMS -PANEL Section-

| | | | | | | | |
|--|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|---|---|---|---|---|---|---|

A

B

C

D

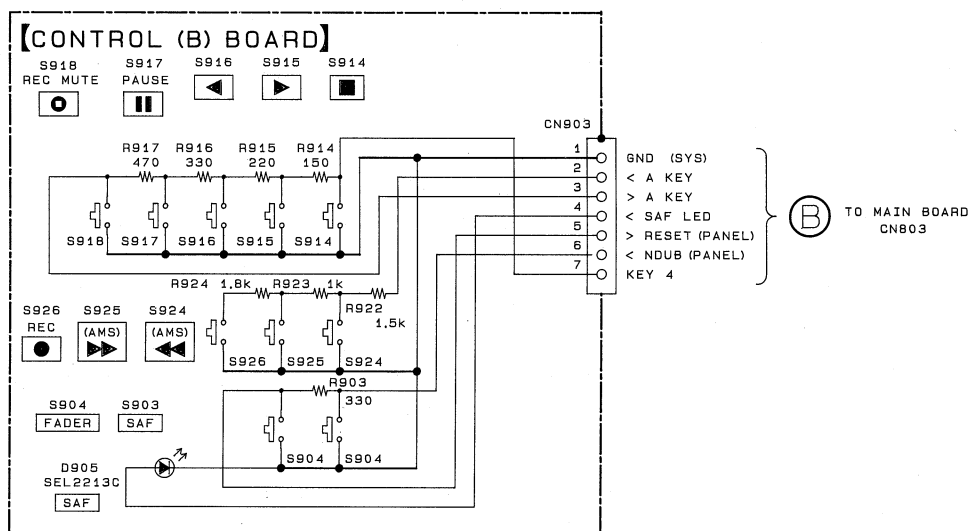
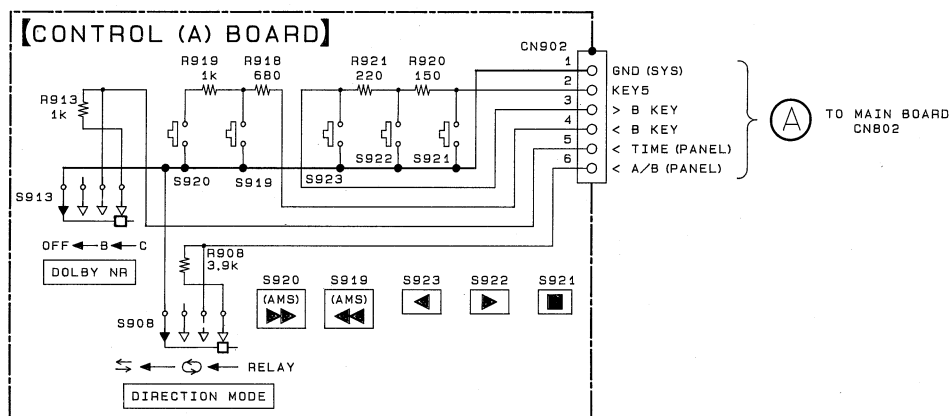
E

F

G

H

I



SECTION 5 EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.

- Color Indication of Appearance Parts

Example:

KNOB, BALANCE(WHITE)...(RED)

↑ ↑
Parts color Cabinet's color

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- hardware (#mark) list is given in the last of this parts list.

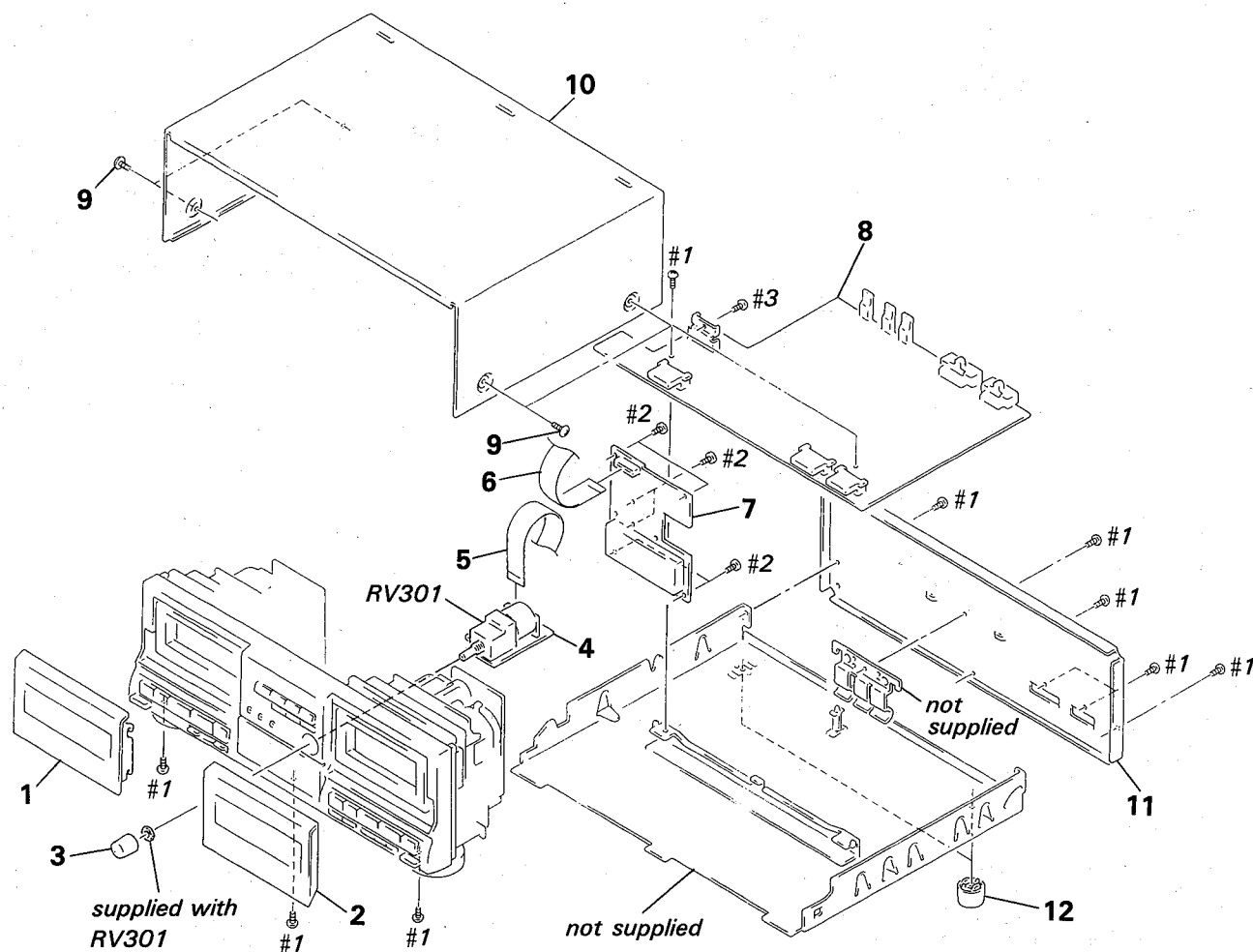
G:Germany

EA:Saudi Arabia

IT:Italian

AUS:Australian

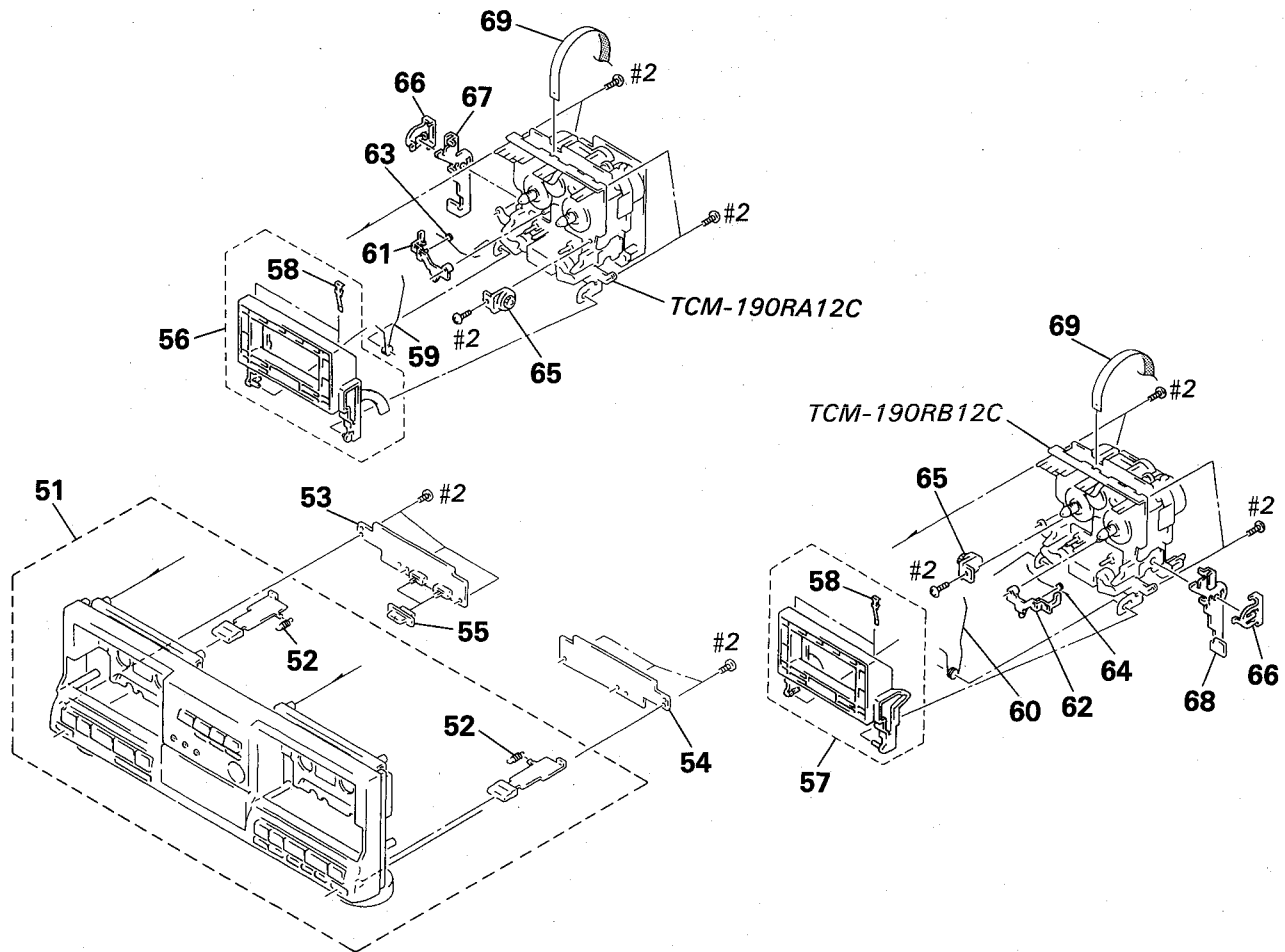
5-1. OVERALL SECTION



| Ref.No. | Part No. | Description | Remark |
|---------|--------------|------------------------------------|--------|
| 1 | X-3364-983-1 | LID (A) ASSY, CASSETTE (EXCEPT IT) | |
| 1 | X-3364-984-1 | LID (A) ASSY, CASSETTE (IT) | |
| 2 | X-3364-985-1 | LID (B) ASSY, CASSETTE (EXCEPT IT) | |
| 2 | X-3364-986-1 | LID (B) ASSY, CASSETTE (IT) | |
| 3 | 4-950-651-21 | KNOB (DIA. 16), ROUND (IT) | |
| 3 | 4-950-651-31 | KNOB (DIA. 16), ROUND (EXCEPT IT) | |
| * 4 | 1-643-528-11 | REC VOL BOARD | |
| * 5 | 1-574-726-11 | WIRE, FLAT TYPE (13 CORE) | |
| 6 | 1-690-907-11 | WIRE (FLAT TYPE) (17 CORE) | |
| * 7 | A-2006-797-A | PANEL BOARD, COMPLETE | |

| Ref.No. | Part No. | Description | Remark |
|---------|--------------|------------------------------------|--------|
| * 8 | A-2006-796-A | MAIN BOARD, COMPLETE (EXCEPT G) | |
| * 8 | A-2006-837-A | MAIN BOARD, COMPLETE (G) | |
| 9 | 3-363-099-01 | SCREW (CASE +3X8 TP2) | |
| * 10 | 4-939-803-31 | CASE (EXCEPT IT) | |
| * 10 | 4-939-803-71 | CASE (IT) | |
| * 11 | 3-377-136-51 | PANEL, BACK (EXCEPT G) | |
| * 11 | 3-377-136-61 | PANEL, BACK (G) | |
| 12 | 4-931-169-01 | FOOT | |
| RV301 | 1-241-891-11 | RES, VAR, CARBON 20KX3 (REC LEVEL) | |

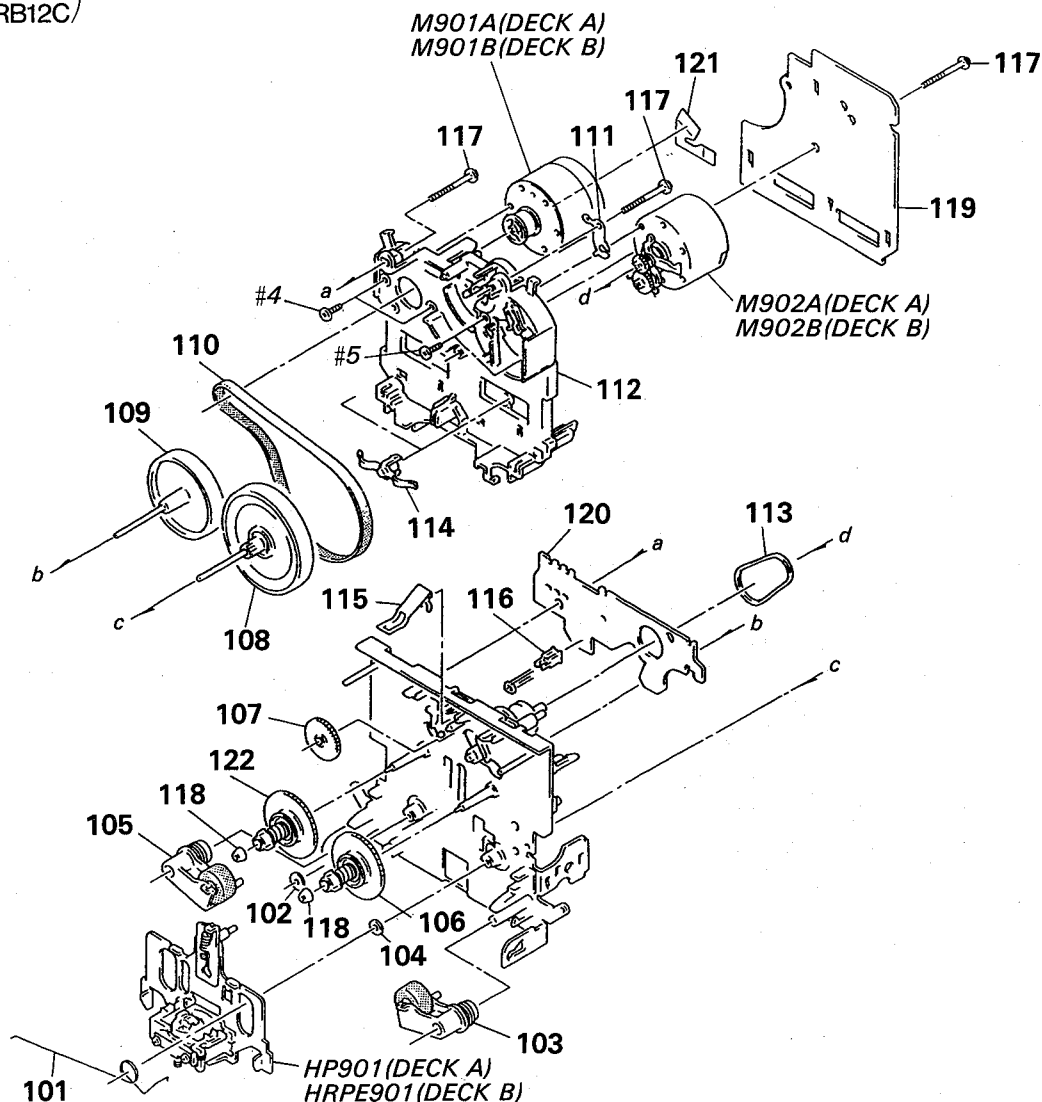
5-2. FRONT PANEL SECTION



| Ref.No. | Part No. | Description | Remark |
|---------|--------------|-------------------------------|--------|
| 51 | X-3364-708-1 | PANEL ASSY, FRONT (EXCEPT IT) | |
| 51 | X-3364-709-1 | PANEL ASSY, FRONT (IT) | |
| 52 | 3-662-752-21 | SPRING, TENSION | |
| * 53 | 1-643-526-11 | CONTROL (A) BOARD | |
| * 54 | 1-643-527-11 | CONTROL (B) BOARD | |
| 55 | 3-377-120-01 | KNOB (SLIDE) (EXCEPT IT) | |
| 55 | 3-377-120-11 | KNOB (SLIDE) (IT) | |
| 56 | X-3340-194-1 | HOLDER (L) ASSY, CASSETTE | |
| 57 | X-3340-195-1 | HOLDER (R) ASSY, CASSETTE | |
| 58 | 3-308-823-11 | SPRING | |
| 59 | 3-354-959-01 | SPRING (LOADING L), TORSION | |

| Ref.No. | Part No. | Description | Remark |
|---------|--------------|-----------------------------|--------|
| 60 | 3-354-960-01 | SPRING (LOADING R), TORSION | |
| 61 | 3-354-955-01 | LEVER (EJ SAFTY LEVER L) | |
| 62 | 3-354-956-01 | LEVER (EJ SAFTY LEVER R) | |
| 63 | 3-354-961-01 | SPRING (EJ SAFTY SPRING L) | |
| 64 | 3-354-962-01 | SPRING (EJ SAFTY SPRING R) | |
| 65 | 3-354-963-01 | DAMPER | |
| 66 | 3-354-957-01 | JOINT (LOCK LEVER) | |
| * 67 | 3-363-638-01 | LEVER (LOCK LEVER L) | |
| * 68 | 3-363-639-01 | LEVER (LOCK LEVER R) | |
| 69 | 1-690-906-11 | WIRE (FLAT TYPE) (9 CORE) | |

5-3. MECHANISM SECTION-1

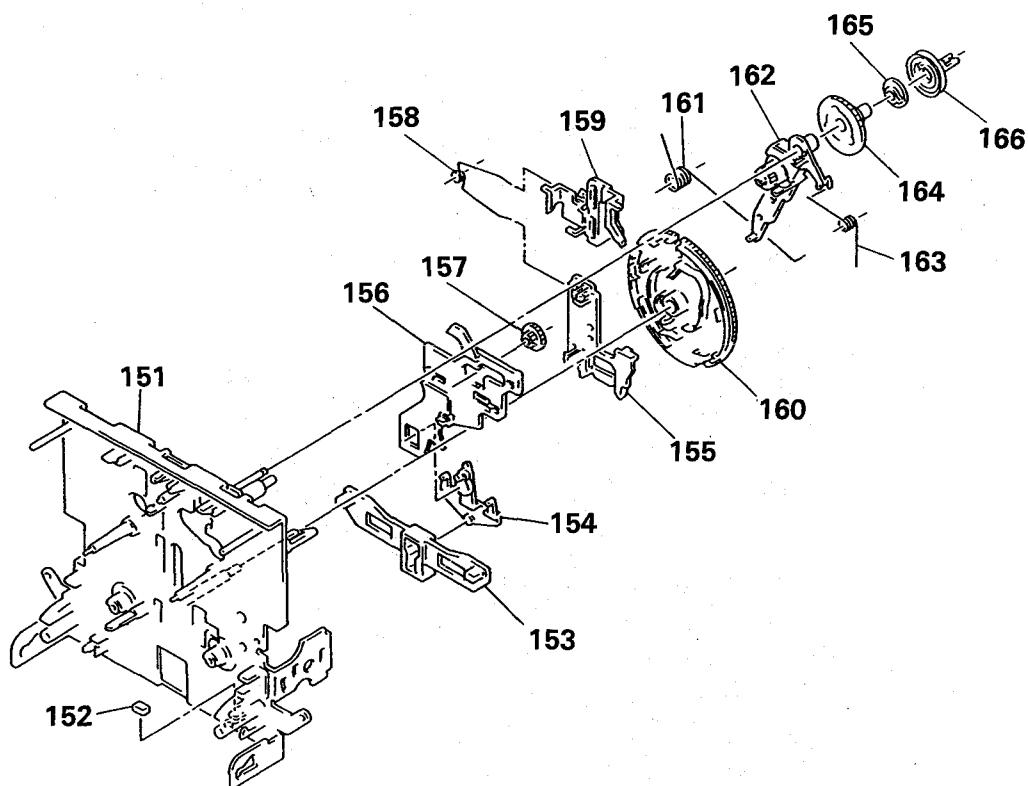
(TCM-190RA12C)
(TCM-190RB12C)

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|----------------------------------|--------|
| 101 | 3-359-455-01 | SPRING, TORSION | |
| 102 | 3-356-714-01 | WASHER | |
| 103 | X-3359-408-1 | LEVER (PINCH LEVER FWD) ASSY | |
| 104 | 3-356-713-01 | WASHER | |
| 105 | X-3359-409-1 | LEVER (PINCH LEVER REV) ASSY | |
| 106 | X-3359-404-1 | TABLE ASSY, REEL | |
| 107 | 3-359-424-01 | GEAR (REV GEAR) | |
| 108 | X-3364-554-1 | FLYWHEEL (FWD) ASSY | |
| 109 | X-3359-410-1 | FLYWHEEL (REV) ASSY | |
| 110 | 3-359-417-01 | BELT (FLAT), CAPSTAN | |
| 111 | 3-359-450-01 | PLATE, GROUND | |
| * 112 | 3-359-436-01 | BASE (THRUST RETAINER), FITTING | |
| 113 | 3-359-466-01 | BELT (FR), SQUARE | |
| 114 | 3-575-321-00 | RETAINER, THRUST, CAPSTAN | |
| 115 | 3-359-430-01 | SPRING (CASSETTE RETAINER), LEAF | |

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|---|--------|
| 116 | 3-343-419-01 | HOLDER (S SENSER A) | |
| 117 | 3-359-414-01 | SCREW (+PTPWH 2X23) | |
| 118 | 3-362-308-01 | CAP (REEL) | |
| * 119 | A-2006-399-A | MD-A BOARD, COMPLETE (DECK A) | |
| * 119 | A-2006-401-A | MD-HX BOARD, COMPLETE (DECK B) | |
| * 120 | 1-634-841-14 | SW-A BOARD (DECK A) | |
| * 120 | 1-634-841-14 | SW-B BOARD (DECK B) | |
| 121 | 1-638-983-11 | MOTOR FLEXIBLE BOARD | |
| 122 | X-3362-078-1 | TABLE ASSY (B), REEL | |
| M901A | X-3359-417-1 | MOTOR ASSY (CAPSTAN) (DECK A) | |
| M901B | X-3359-417-1 | MOTOR ASSY (CAPSTAN) (DECK B) | |
| M902A | X-3363-501-1 | MOTOR ASSY (REEL) (DECK A) | |
| M902B | X-3363-501-1 | MOTOR ASSY (REEL) (DECK B) | |
| HP901 | A-2003-837-A | BASE ASSY, HEAD (PB) (DECK A) | |
| HRPE901A | A-2003-838-A | BASE ASSY, HEAD (PB/REC/ERASE) (DECK B) | |

5-4. MECHANISM SECTION-2

(TCM-190RA12C)
(TCM-190RB12C)



| Ref. No. | Part No. | Description | Remark |
|----------|--------------|--------------------------|--------|
| 151 | X-3359-415-1 | CHASSIS ASSY, MECHANICSL | |
| 152 | 3-359-469-01 | SPACER | |
| * 153 | 3-359-425-01 | SLIDER (REVERSE SLIDER) | |
| 154 | 3-359-426-01 | LEVER (REVERSE LEVER) | |
| * 155 | 3-359-427-01 | SLIDER (LEVERSE SLIDER) | |
| * 156 | 3-359-415-01 | SLIDER (TRIGGER SLIDER) | |
| 157 | 3-359-448-01 | GEAR (TRIGGER) | |
| 158 | 3-359-454-01 | SPRING, TORSION | |

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|----------------------------------|--------|
| 159 | 3-359-429-01 | SLIDER (BRAKE PLATE) | |
| 160 | 3-359-420-01 | GEAR (CAM GEAR) | |
| 161 | 3-359-456-01 | SPRING (TRIGGER SPRING), TORSION | |
| 162 | X-3359-405-1 | LEVER (FR ARM) ASSY | |
| 163 | 3-359-453-01 | SPRING (FR ARM), TORSION | |
| 164 | 3-359-419-01 | GEAR (FR GEAR) | |
| 165 | 3-359-421-01 | CLUTCH (REEL DISK) | |
| 166 | 3-359-418-01 | PULLEY (FR PULLEY) | |

SECTION 6 ELECTRICAL PARTS LIST

CONTROL (A)

COTROL (B)

MAIN

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A.. uPA...: μ PA..
uPB...: μ PB.. uPC...: μ PC.. uPD...: μ PD..
- CAPACITORS
uF: μ F
- COILS
uH: μ H
- G: Germany

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|--------------------------------|--------|
| * | 1-643-526-11 | CONTROL (A) BOARD ***** | |
| | | < CONNECTOR > | |
| *CN902 | 1-564-499-11 | PIN, CONNECTOR 6P | |
| | | < RESISTOR > | |
| R908 | 1-249-424-11 | CARBON 3.9K 5% 1/4W | |
| R913 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R918 | 1-249-415-11 | CARBON 680 5% 1/4W | |
| R919 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R920 | 1-249-407-11 | CARBON 150 5% 1/4W | |
| R921 | 1-249-409-11 | CARBON 220 5% 1/4W | |
| | | < SWITCH > | |
| S908 | 1-572-378-11 | SWITCH, SLIDE (DIRECTION MODE) | |
| S913 | 1-572-378-11 | SWITCH, SLIDE (DOLBY NR) | |
| S919 | 1-554-303-21 | SWITCH, TACTILE (AMS REW) | |
| S920 | 1-554-303-21 | SWITCH, TACTILE (AMS FF) | |
| S921 | 1-554-303-21 | SWITCH, TACTILE (STOP) | |
| S922 | 1-554-303-21 | SWITCH, TACTILE (FWD) | |
| S923 | 1-554-303-21 | SWITCH, TACTILE (REV) | |
| ***** | | | |
| * | 1-643-527-11 | CONTROL (B) BOARD ***** | |
| | | < CONNECTOR > | |
| *CN903 | 1-564-500-11 | PIN, CONNECTOR 7P | |
| | | < DIODE > | |
| D905 | 8-719-302-23 | LED SEL2213C-C (SAF) | |

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|-----------------------------------|--------|
| | | < RESISTOR > | |
| R903 | 1-249-411-11 | CARBON 330 5% 1/4W | |
| R914 | 1-249-407-11 | CARBON 150 5% 1/4W | |
| R915 | 1-249-409-11 | CARBON 220 5% 1/4W | |
| R916 | 1-249-411-11 | CARBON 330 5% 1/4W | |
| R917 | 1-249-413-11 | CARBON 470 5% 1/4W | |
| R922 | 1-249-419-11 | CARBON 1.5K 5% 1/4W | |
| R923 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R924 | 1-249-420-11 | CARBON 1.8K 5% 1/4W | |
| | | < SWITCH > | |
| S903 | 1-554-303-21 | SWITCH, TACTILE (SAF) | |
| S904 | 1-554-303-21 | SWITCH, TACTILE (FADER) | |
| S914 | 1-554-303-21 | SWITCH, TACTILE (STOP) | |
| S915 | 1-554-303-21 | SWITCH, TACTILE (FWD) | |
| S916 | 1-554-303-21 | SWITCH, TACTILE (REV) | |
| S917 | 1-554-303-21 | SWITCH, TACTILE (PAUSE) | |
| S918 | 1-554-303-21 | SWITCH, TACTILE (REC MUTE) | |
| S924 | 1-554-303-21 | SWITCH, TACTILE (AMS REW) | |
| S925 | 1-554-303-21 | SWITCH, TACTILE (AMS FF) | |
| S926 | 1-554-303-21 | SWITCH, TACTILE (REC) | |
| ***** | | | |
| * | A-2006-796-A | MAIN BOARD, COMPLETE (EXCEPT G) | |
| * | A-2006-837-A | MAIN BOARD, COMPLETE (G) ***** | |
| | | < CAPACITOR > | |
| C101 | 1-136-157-00 | FILM 0.022uF 5% 50V | |
| C102 | 1-126-161-11 | ELECT 2.2uF 20% 50V | |
| C103 | 1-126-059-11 | ELECT 10uF 20% 50V | |
| C104 | 1-126-301-11 | ELECT 1uF 20% 50V | |

MAIN

| Ref. No. | Part No. | Description | Remark | | |
|----------|--------------|-------------|----------|-----|---------|
| C105 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C106 | 1-130-475-00 | MYLAR | 0.0022uF | 5% | 50V |
| C107 | 1-130-475-00 | MYLAR | 0.0022uF | 5% | 50V |
| C108 | 1-136-174-00 | FILM | 0.56uF | 5% | 50V |
| C109 | 1-136-171-00 | FILM | 0.33uF | 5% | 50V |
| C110 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C111 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C112 | 1-126-162-11 | ELECT | 3.3uF | 20% | 50V |
| C113 | 1-126-300-11 | ELECT | 0.47uF | 20% | 50V |
| C114 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C201 | 1-136-157-00 | FILM | 0.022uF | 5% | 50V |
| C202 | 1-126-161-11 | ELECT | 2.2uF | 20% | 50V |
| C203 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C204 | 1-126-301-11 | ELECT | 1uF | 20% | 50V |
| C205 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C206 | 1-130-475-00 | MYLAR | 0.0022uF | 5% | 50V |
| C207 | 1-130-475-00 | MYLAR | 0.0022uF | 5% | 50V |
| C208 | 1-136-174-00 | FILM | 0.56uF | 5% | 50V |
| C209 | 1-136-171-00 | FILM | 0.33uF | 5% | 50V |
| C210 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C211 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C212 | 1-126-162-11 | ELECT | 3.3uF | 20% | 50V |
| C213 | 1-126-300-11 | ELECT | 0.47uF | 20% | 50V |
| C214 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C401 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V |
| C402 | 1-101-005-00 | CERAMIC | 22000PF | | 50V |
| C403 | 1-101-005-00 | CERAMIC | 22000PF | | 50V |
| C404 | 1-101-005-00 | CERAMIC | 22000PF | | 50V |
| C420 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V |
| C430 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V (G) |
| C431 | 1-162-286-31 | CERAMIC | 220PF | 10% | 50V (G) |
| C432 | 1-162-286-31 | CERAMIC | 220PF | 10% | 50V (G) |
| C433 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V (G) |
| C434 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V (G) |
| C435 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V (G) |
| C436 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V (G) |
| C501 | 1-124-994-11 | ELECT | 100uF | 20% | 10V |
| C502 | 1-124-994-11 | ELECT | 100uF | 20% | 10V |
| C503 | 1-126-059-11 | ELECT | 10uF | 20% | 50V |
| C504 | 1-126-161-11 | ELECT | 2.2uF | 20% | 50V |
| C506 | 1-161-494-00 | CERAMIC | 0.022uF | | 25V |
| C508 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C510 | 1-126-161-11 | ELECT | 2.2uF | 20% | 50V |
| C511 | 1-126-161-11 | ELECT | 2.2uF | 20% | 50V |
| C512 | 1-124-910-11 | ELECT | 47uF | 20% | 50V |
| C513 | 1-126-161-11 | ELECT | 2.2uF | 20% | 50V |
| C514 | 1-124-910-11 | ELECT | 47uF | 20% | 50V |
| C515 | 1-124-478-11 | ELECT | 100uF | 20% | 25V |
| C516 | 1-124-478-11 | ELECT | 100uF | 20% | 25V |

| Ref. No. | Part No. | Description | Remark | | |
|---------------|--------------|---------------------------|---------|-----|-------------------|
| C701 | 1-126-937-11 | ELECT | 4700uF | 20% | 16V |
| C702 | 1-126-937-11 | ELECT | 4700uF | 20% | 16V |
| C703 | 1-126-101-11 | ELECT | 100uF | 20% | 16V |
| C704 | 1-124-473-11 | ELECT | 1000uF | 20% | 10V |
| C705 | 1-124-473-11 | ELECT | 1000uF | 20% | 10V |
| C706 | 1-126-161-11 | ELECT | 2.2uF | 20% | 50V |
| C707 | 1-124-472-11 | ELECT | 470uF | 20% | 10V |
| C708 | 1-126-301-11 | ELECT | 1uF | 20% | 50V |
| C709 | 1-126-301-11 | ELECT | 1uF | 20% | 50V |
| C710 | 1-126-301-11 | ELECT | 1uF | 20% | 50V |
| C711 | 1-101-005-00 | CERAMIC | 22000PF | | 50V |
| C712 | 1-126-867-11 | ELECT | 33uF | 20% | 50V |
| C720 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V |
| C801 | 1-126-162-11 | ELECT | 3.3uF | 20% | 50V |
| C802 | 1-162-288-31 | CERAMIC | 330PF | 10% | 50V |
| C803 | 1-136-165-00 | FILM | 0.1uF | 5% | 50V |
| C804 | 1-162-288-31 | CERAMIC | 330PF | 10% | 50V |
| C805 | 1-136-165-00 | FILM | 0.1uF | 5% | 50V |
| C806 | 1-124-994-11 | ELECT | 100uF | 20% | 10V |
| C807 | 1-124-994-11 | ELECT | 100uF | 20% | 10V |
| C808 | 1-101-005-00 | CERAMIC | 22000PF | | 50V |
| C809 | 1-124-994-11 | ELECT | 100uF | 20% | 10V |
| C810 | 1-136-165-00 | FILM | 0.1uF | 5% | 50V |
| C811 | 1-161-379-00 | CERAMIC | 0.01uF | 20% | 25V (EXCEPT G) |
| C811 | 1-164-159-11 | CERAMIC | 0.1uF | | 50V (G) |
| C813 | 1-126-161-11 | ELECT | 2.2uF | 20% | 50V |
| < CONNECTOR > | | | | | |
| *CN501 | 1-580-784-11 | CONNECTOR, BOARD TO BOARD | | | |
| *CN502 | 1-580-784-11 | CONNECTOR, BOARD TO BOARD | | | |
| *CN503 | 1-580-784-11 | CONNECTOR, BOARD TO BOARD | | | |
| *CN504 | 1-566-858-41 | SOCKET, CONNECTOR 11P | | | |
| *CN505 | 1-568-828-11 | SOCKET, CONNECTOR 9P | | | |
| *CN506 | 1-568-828-11 | SOCKET, CONNECTOR 9P | | | |
| *CN507 | 1-568-832-11 | SOCKET, CONNECTOR 13P | | | |
| *CN701 | 1-566-859-11 | SOCKET, CONNECTOR 15P | | | |
| *CN801 | 1-568-836-11 | SOCKET, CONNECTOR 17P | | | |
| *CN802 | 1-564-340-61 | PIN, CONNECTOR 6P | | | |
| *CN803 | 1-564-341-11 | PIN, CONNECTOR 7P | | | |
| < DIODE > | | | | | |
| D101 | 8-719-987-63 | DIODE | 1N4148M | | |
| D102 | 8-719-987-63 | DIODE | 1N4148M | | |
| D201 | 8-719-987-63 | DIODE | 1N4148M | | |
| D202 | 8-719-987-63 | DIODE | 1N4148M | | |
| D401 | 8-719-933-54 | DIODE | HZS9A2L | | |
| D402 | 8-719-933-54 | DIODE | HZS9A2L | | |

| Ref. No. | Part No. | Description | Remark |
|----------------|--------------|------------------|----------------|
| D501 | 8-719-987-63 | DIODE | 1N4148M |
| D503 | 8-719-987-63 | DIODE | 1N4148M |
| D504 | 8-719-987-63 | DIODE | 1N4148M |
| D701 | 8-719-200-77 | DIODE | 10E2N |
| D702 | 8-719-200-77 | DIODE | 10E2N |
| D703 | 8-719-200-77 | DIODE | 10E2N |
| D704 | 8-719-200-77 | DIODE | 10E2N |
| D705 | 8-719-200-77 | DIODE | 10E2N |
| D706 | 8-719-200-77 | DIODE | 10E2N |
| D707 | 8-719-933-33 | DIODE | HZS6A1L |
| D708 | 8-719-933-33 | DIODE | HZS6A1L |
| D709 | 8-719-000-78 | DIODE | UZL-7L2 |
| D801 | 8-719-933-54 | DIODE | HZS9A2L |
| D802 | 8-719-987-63 | DIODE | 1N4148M |
| D803 | 8-719-987-63 | DIODE | 1N4148M |
| D804 | 8-719-987-63 | DIODE | 1N4148M |
| D807 | 8-719-987-63 | DIODE | 1N4148M |
| D808 | 8-719-987-63 | DIODE | 1N4148M |
| D809 | 8-719-987-63 | DIODE | 1N4148M |
| < IC > | | | |
| IC501 | 8-759-140-53 | IC | uPD4053BC |
| IC502 | 8-759-634-51 | IC | M5218AP |
| IC503 | 8-752-059-55 | IC | CXA1331S |
| IC504 | 8-752-055-61 | IC | CXA1578P |
| IC505 | 8-759-945-58 | IC | RC4558P |
| IC506 | 8-759-000-49 | IC | MC14066BCP |
| IC507 | 8-759-945-58 | IC | RC4558P |
| IC701 | 8-759-945-58 | IC | RC4558P |
| IC801 | 8-759-635-94 | IC | M50925SP-482SP |
| IC802 | 8-759-207-05 | IC | TA7272P |
| IC803 | 8-759-000-48 | IC | MC14052BCP |
| IC804 | 8-759-240-71 | IC | TC4071BP |
| IC805 | 8-759-067-45 | IC | M50944-180SP |
| < COIL > | | | |
| L501 | 1-408-080-00 | INDUCTOR | 100uH |
| < FILTER > | | | |
| LPF101 | 1-236-087-11 | FILTER, LOW PASS | |
| LPF201 | 1-236-087-11 | FILTER, LOW PASS | |
| < TRANSISTOR > | | | |
| Q101 | 8-729-900-74 | TRANSISTOR | DTC143TS |
| Q102 | 8-729-620-05 | TRANSISTOR | 2SC2603-EF |
| Q201 | 8-729-900-74 | TRANSISTOR | DTC143TS |
| Q202 | 8-729-620-05 | TRANSISTOR | 2SC2603-EF |
| Q501 | 8-729-900-61 | TRANSISTOR | DTA114ES |

| Ref. No. | Part No. | Description | Remark |
|--------------|--------------|-------------|--------------|
| Q502 | 8-729-900-61 | TRANSISTOR | DTA114ES |
| Q503 | 8-729-900-80 | TRANSISTOR | DTC114ES |
| Q504 | 8-729-900-80 | TRANSISTOR | DTC114ES |
| Q505 | 8-729-900-61 | TRANSISTOR | DTA114ES |
| Q506 | 8-729-119-76 | TRANSISTOR | 2SA1175-HFE |
| Q507 | 8-729-900-89 | TRANSISTOR | DTC144ES |
| Q508 | 8-729-900-80 | TRANSISTOR | DTC114ES |
| Q509 | 8-729-900-74 | TRANSISTOR | DTC143TS |
| Q510 | 8-729-141-26 | TRANSISTOR | 2SC3622A-LK |
| Q511 | 8-729-900-80 | TRANSISTOR | DTC114ES |
| Q512 | 8-729-119-76 | TRANSISTOR | 2SA1175-HFE |
| Q513 | 8-729-119-76 | TRANSISTOR | 2SA1175-HFE |
| Q514 | 8-729-900-74 | TRANSISTOR | DTC143TS |
| Q515 | 8-729-900-61 | TRANSISTOR | DTA114ES |
| Q516 | 8-729-900-80 | TRANSISTOR | DTC114ES |
| Q517 | 8-729-900-61 | TRANSISTOR | DTA114ES |
| Q601 | 8-729-900-65 | TRANSISTOR | DTA144ES |
| Q701 | 8-729-141-83 | TRANSISTOR | 2SB1094-LK |
| Q702 | 8-729-209-15 | TRANSISTOR | 2SD2012 |
| Q703 | 8-729-620-05 | TRANSISTOR | 2SC2603-EF |
| Q704 | 8-729-209-15 | TRANSISTOR | 2SD2012 |
| Q705 | 8-729-620-05 | TRANSISTOR | 2SC2603-EF |
| Q706 | 8-729-620-05 | TRANSISTOR | 2SC2603-EF |
| Q801 | 8-729-900-80 | TRANSISTOR | DTC114ES |
| Q802 | 8-729-900-61 | TRANSISTOR | DTA114ES |
| Q803 | 8-729-119-76 | TRANSISTOR | 2SA1175-HFE |
| Q804 | 8-729-900-89 | TRANSISTOR | DTC144ES |
| Q805 | 8-729-900-65 | TRANSISTOR | DTA144ES |
| Q806 | 8-729-900-61 | TRANSISTOR | DTA114ES |
| Q810 | 8-729-900-61 | TRANSISTOR | DTA114ES |
| Q813 | 8-729-900-61 | TRANSISTOR | DTA114ES |
| Q814 | 8-729-900-89 | TRANSISTOR | DTC144ES |
| Q815 | 8-729-801-84 | TRANSISTOR | 2SB1013-4 |
| Q816 | 8-729-801-84 | TRANSISTOR | 2SB1013-4 |
| < RESISTOR > | | | |
| R101 | 1-249-421-11 | CARBON | 2.2K 5% 1/4W |
| R102 | 1-249-423-11 | CARBON | 3.3K 5% 1/4W |
| R103 | 1-247-887-00 | CARBON | 220K 5% 1/4W |
| R106 | 1-249-421-11 | CARBON | 2.2K 5% 1/4W |
| R107 | 1-249-437-11 | CARBON | 47K 5% 1/4W |
| R109 | 1-249-423-11 | CARBON | 3.3K 5% 1/4W |
| R110 | 1-249-428-11 | CARBON | 8.2K 5% 1/4W |
| R112 | 1-247-864-11 | CARBON | 24K 5% 1/4W |
| R113 | 1-249-414-11 | CARBON | 560 5% 1/4W |
| R115 | 1-249-421-11 | CARBON | 2.2K 5% 1/4W |
| R117 | 1-249-431-11 | CARBON | 15K 5% 1/4W |
| R118 | 1-249-421-11 | CARBON | 2.2K 5% 1/4W |
| R119 | 1-249-429-11 | CARBON | 10K 5% 1/4W |

MAIN

| Ref. No. | Part No. | Description | | | Remark |
|----------|--------------|-------------|-------|----|--------|
| R120 | 1-249-421-11 | CARBON | 2. 2K | 5% | 1/4W |
| R121 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R122 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W |
| R123 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W |
| R124 | 1-249-410-11 | CARBON | 270 | 5% | 1/4W |
| R126 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R127 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R201 | 1-249-421-11 | CARBON | 2. 2K | 5% | 1/4W |
| R202 | 1-249-423-11 | CARBON | 3. 3K | 5% | 1/4W |
| R203 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R206 | 1-249-421-11 | CARBON | 2. 2K | 5% | 1/4W |
| R207 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R209 | 1-249-423-11 | CARBON | 3. 3K | 5% | 1/4W |
| R210 | 1-249-428-11 | CARBON | 8. 2K | 5% | 1/4W |
| R212 | 1-247-864-11 | CARBON | 24K | 5% | 1/4W |
| R213 | 1-249-414-11 | CARBON | 560 | 5% | 1/4W |
| R215 | 1-249-421-11 | CARBON | 2. 2K | 5% | 1/4W |
| R217 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W |
| R218 | 1-249-421-11 | CARBON | 2. 2K | 5% | 1/4W |
| R219 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R220 | 1-249-421-11 | CARBON | 2. 2K | 5% | 1/4W |
| R221 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R222 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W |
| R223 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W |
| R224 | 1-249-410-11 | CARBON | 270 | 5% | 1/4W |
| R226 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R227 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R501 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R502 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R503 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W |
| R504 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R505 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R506 | 1-247-864-11 | CARBON | 24K | 5% | 1/4W |
| R507 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R510 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R511 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R512 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R513 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R514 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R515 | 1-249-428-11 | CARBON | 8. 2K | 5% | 1/4W |
| R516 | 1-249-423-11 | CARBON | 3. 3K | 5% | 1/4W |
| R517 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R518 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R519 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R520 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R521 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R522 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R524 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R526 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |

| Ref. No. | Part No. | Description | | | Remark |
|----------|--------------|-------------|-------|----|--------|
| R527 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R528 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R529 | 1-249-425-11 | CARBON | 4. 7K | 5% | 1/4W |
| R530 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R531 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W |
| R532 | 1-247-842-11 | CARBON | 3K | 5% | 1/4W |
| R533 | 1-249-438-11 | CARBON | 56K | 5% | 1/4W |
| R534 | 1-247-882-11 | CARBON | 130K | 5% | 1/4W |
| R535 | 1-249-440-11 | CARBON | 82K | 5% | 1/4W |
| R536 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R537 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R538 | 1-249-425-11 | CARBON | 4. 7K | 5% | 1/4W |
| R539 | 1-249-414-11 | CARBON | 560 | 5% | 1/4W |
| R540 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R541 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R542 | 1-249-425-11 | CARBON | 4. 7K | 5% | 1/4W |
| R543 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R601 | 1-249-427-11 | CARBON | 6. 8K | 5% | 1/4W |
| R602 | 1-249-425-11 | CARBON | 4. 7K | 5% | 1/4W |
| R603 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R604 | 1-247-862-11 | CARBON | 20K | 5% | 1/4W |
| R605 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R701 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R702 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R703 | 1-249-422-11 | CARBON | 2. 7K | 5% | 1/4W |
| R704 | 1-247-858-11 | CARBON | 13K | 5% | 1/4W |
| R705 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R706 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R707 | 1-247-850-11 | CARBON | 6. 2K | 5% | 1/4W |
| R708 | 1-249-422-11 | CARBON | 2. 7K | 5% | 1/4W |
| R709 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R710 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R711 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R712 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W |
| R713 | 1-249-423-11 | CARBON | 3. 3K | 5% | 1/4W |
| R714 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R715 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R801 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R802 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R803 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W |
| R804 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W |
| R805 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R806 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R807 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W |
| R808 | 1-247-895-00 | CARBON | 470K | 5% | 1/4W |
| R809 | 1-247-895-00 | CARBON | 470K | 5% | 1/4W |
| R810 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W |
| R811 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R812 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |

MD-A

MD-HX

| Ref.No. | Part No. | Description | Remark | | |
|---------|--------------|-------------|--------|----|-------|
| R23 | 1-216-100-00 | METAL GLAZE | 130K | 5% | 1/10W |
| R24 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W |
| R31 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W |
| R32 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W |
| R71 | 1-216-082-00 | METAL GLAZE | 24K | 5% | 1/10W |
| R72 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R73 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W |
| R74 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W |

< VARIABLE RESISTOR >

| | | |
|------|--------------|----------------------|
| RV11 | 1-241-627-11 | RES, ADJ, CARBON 1K |
| RV21 | 1-241-627-11 | RES, ADJ, CARBON 1K |
| RV71 | 1-241-630-11 | RES, ADJ, CARBON 10K |
| RV72 | 1-241-630-11 | RES, ADJ, CARBON 10K |

* A-2006-401-A MD-HX BOARD, COMPLETE

< CAPACITOR >

| | | | | | |
|-----|--------------|--------------|----------|-----|------|
| C11 | 1-163-131-00 | CERAMIC CHIP | 390PF | 5% | 50V |
| C12 | 1-136-157-00 | FILM | 0.022uF | 5% | 50V |
| C13 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C18 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C21 | 1-163-131-00 | CERAMIC CHIP | 390PF | 5% | 50V |
| C22 | 1-136-157-00 | FILM | 0.022uF | 5% | 50V |
| C23 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C28 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C31 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C32 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C33 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C51 | 1-164-161-11 | CERAMIC CHIP | 0.0022uF | 10% | 100V |
| C52 | 1-164-161-11 | CERAMIC CHIP | 0.0022uF | 10% | 100V |
| C53 | 1-163-019-00 | CERAMIC CHIP | 0.0068uF | 10% | 50V |
| C54 | 1-136-601-11 | FILM | 0.01uF | 5% | 630V |
| C56 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | | 16V |
| C57 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C71 | 1-164-346-11 | CERAMIC CHIP | 1uF | | 16V |
| C80 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C81 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C82 | 1-136-157-00 | FILM | 0.022uF | 5% | 50V |
| C83 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C84 | 1-136-478-11 | FILM | 470PF | 5% | 630V |
| C85 | 1-136-433-11 | FILM | 100PF | 5% | 630V |
| C86 | 1-163-143-00 | CERAMIC CHIP | 0.0012uF | 5% | 50V |
| C87 | 1-136-273-91 | FILM | 75PF | 5% | 630V |
| C88 | 1-163-003-11 | CERAMIC CHIP | 330PF | 10% | 50V |
| C89 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C90 | 1-107-045-00 | MICA | 3.9PF | | 500V |
| C91 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |

| Ref.No. | Part No. | Description | Remark | | |
|---------|--------------|--------------|----------|-----|------|
| C92 | 1-136-157-00 | FILM | 0.022uF | 5% | 50V |
| C93 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C94 | 1-136-478-11 | FILM | 470PF | 5% | 630V |
| C95 | 1-136-433-11 | FILM | 100PF | 5% | 630V |
| C96 | 1-163-143-00 | CERAMIC CHIP | 0.0012uF | 5% | 50V |
| C97 | 1-136-273-91 | FILM | 75PF | 5% | 630V |
| C98 | 1-163-003-11 | CERAMIC CHIP | 330PF | 10% | 50V |
| C99 | 1-164-005-11 | CERAMIC CHIP | 0.47uF | | 25V |

< CONNECTOR >

| | | |
|--------|--------------|--------------------------------|
| *CNP31 | 1-580-782-11 | CONNECTOR, BOARD TO BOARD |
| *CNP32 | 1-580-781-11 | PIN, CONNECTOR (PC BOARD) 7P |
| *CNP33 | 1-580-782-11 | CONNECTOR, BOARD TO BOARD |
| *CNP71 | 1-564-719-11 | PIN, CONNECTOR (SMALL TYPE) 3P |
| *CNP72 | 1-580-411-11 | SOCKET, CONNECTOR 4P |

< DIODE >

| | | | |
|-----|--------------|-------|--------|
| D31 | 8-719-016-74 | DIODE | 1SS352 |
|-----|--------------|-------|--------|

< IC >

| | | | |
|------|--------------|----|-----------|
| IC31 | 8-759-106-02 | IC | uPC4570G2 |
| IC81 | 8-759-106-56 | IC | uPC1297CA |

< COIL >

| | | | |
|-----|--------------|----------|------|
| L81 | 1-410-780-11 | INDUCTOR | 27mH |
| L91 | 1-410-780-11 | INDUCTOR | 27mH |

< TRANSISTOR >

| | | | |
|-----|--------------|------------|-----------|
| Q51 | 8-729-808-01 | TRANSISTOR | 2SD1622-S |
| Q52 | 8-729-808-01 | TRANSISTOR | 2SD1622-S |
| Q53 | 8-729-808-01 | TRANSISTOR | 2SD1622-S |
| Q71 | 8-729-216-22 | TRANSISTOR | 2SA1162 |

< RESISTOR >

| | | | | | |
|-----|--------------|-------------|------|----|-------|
| R11 | 1-216-099-00 | METAL CHIP | 120K | 5% | 1/10W |
| R12 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W |
| R13 | 1-216-100-00 | METAL GLAZE | 130K | 5% | 1/10W |
| R14 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W |
| R21 | 1-216-099-00 | METAL CHIP | 120K | 5% | 1/10W |
| R22 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W |
| R22 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W |
| R23 | 1-216-100-00 | METAL GLAZE | 130K | 5% | 1/10W |
| R24 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W |
| R31 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W |
| R32 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W |
| R51 | 1-216-097-00 | METAL CHIP | 100K | 5% | 1/10W |
| R52 | 1-216-097-00 | METAL CHIP | 100K | 5% | 1/10W |
| R53 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R54 | 1-216-309-00 | METAL CHIP | 5.6 | 5% | 1/10W |

MAIN

MD-A

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|-------------|--------------|
| R813 | 1-249-421-11 | CARBON | 2.2K 5% 1/4W |
| R814 | 1-249-421-11 | CARBON | 2.2K 5% 1/4W |
| R815 | 1-249-421-11 | CARBON | 2.2K 5% 1/4W |
| R816 | 1-249-421-11 | CARBON | 2.2K 5% 1/4W |
| R817 | 1-249-393-11 | CARBON | 10 5% 1/4W |
| R818 | 1-249-435-11 | CARBON | 33K 5% 1/4W |
| R821 | 1-247-903-00 | CARBON | 1M 5% 1/4W |
| R822 | 1-249-435-11 | CARBON | 33K 5% 1/4W |
| R823 | 1-249-425-11 | CARBON | 4.7K 5% 1/4W |
| R824 | 1-249-435-11 | CARBON | 33K 5% 1/4W |
| R825 | 1-249-429-11 | CARBON | 10K 5% 1/4W |
| R826 | 1-249-420-11 | CARBON | 1.8K 5% 1/4W |
| R827 | 1-249-435-11 | CARBON | 33K 5% 1/4W |
| R828 | 1-249-433-11 | CARBON | 22K 5% 1/4W |
| R829 | 1-249-433-11 | CARBON | 22K 5% 1/4W |
| R830 | 1-249-433-11 | CARBON | 22K 5% 1/4W |
| R831 | 1-249-421-11 | CARBON | 2.2K 5% 1/4W |
| R834 | 1-249-425-11 | CARBON | 4.7K 5% 1/4W |
| R835 | 1-249-435-11 | CARBON | 33K 5% 1/4W |
| R836 | 1-249-435-11 | CARBON | 33K 5% 1/4W |
| R837 | 1-249-431-11 | CARBON | 15K 5% 1/4W |
| R838 | 1-249-422-11 | CARBON | 2.7K 5% 1/4W |
| R839 | 1-249-405-11 | CARBON | 100 5% 1/4W |
| R842 | 1-249-425-11 | CARBON | 4.7K 5% 1/4W |
| R843 | 1-247-862-11 | CARBON | 20K 5% 1/4W |
| R844 | 1-247-862-11 | CARBON | 20K 5% 1/4W |
| R845 | 1-249-425-11 | CARBON | 4.7K 5% 1/4W |
| R846 | 1-249-415-11 | CARBON | 680 5% 1/4W |
| R847 | 1-249-429-11 | CARBON | 10K 5% 1/4W |
| R848 | 1-249-415-11 | CARBON | 680 5% 1/4W |
| R849 | 1-249-429-11 | CARBON | 10K 5% 1/4W |
| R851 | 1-249-437-11 | CARBON | 47K 5% 1/4W |
| R852 | 1-247-866-11 | CARBON | 30K 5% 1/4W |
| R853 | 1-247-866-11 | CARBON | 30K 5% 1/4W |
| R854 | 1-249-437-11 | CARBON | 47K 5% 1/4W |
| R855 | 1-247-872-11 | CARBON | 51K 5% 1/4W |
| R856 | 1-247-872-11 | CARBON | 51K 5% 1/4W |
| R857 | 1-247-872-11 | CARBON | 51K 5% 1/4W |
| R858 | 1-247-872-11 | CARBON | 51K 5% 1/4W |
| R859 | 1-249-405-11 | CARBON | 100 5% 1/4W |
| R860 | 1-249-405-11 | CARBON | 100 5% 1/4W |
| R870 | 1-249-451-11 | CARBON | 2.2 5% 1/4W |
| R871 | 1-249-451-11 | CARBON | 2.2 5% 1/4W |

< VARIABLE RESISTOR >

| | | |
|-------|--------------|----------------------|
| RV101 | 1-241-630-11 | RES, ADJ, CARBON 10K |
| RV201 | 1-241-630-11 | RES, ADJ, CARBON 10K |

| Ref. No. | Part No. | Description | Remark |
|----------|----------|-------------|--------|
|----------|----------|-------------|--------|

< VIBRATOR >

| | | |
|------|--------------|------------------------|
| X801 | 1-577-358-21 | VIBRATOR, CERAMIC 4MHz |
| X802 | 1-577-358-21 | VIBRATOR, CERAMIC 4MHz |

| | | |
|---|--------------|----------------------|
| * | A-2006-399-A | MD-A BOARD, COMPLETE |
|---|--------------|----------------------|

< CAPACITOR >

| | | | | | |
|-----|--------------|-----------------|---------|-----|-----|
| C11 | 1-163-131-00 | CERAMIC CHIP | 390PF | 5% | 50V |
| C12 | 1-136-157-00 | FILM | 0.022uF | 5% | 50V |
| C13 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C18 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C21 | 1-163-131-00 | CERAMIC CHIP | 390PF | 5% | 50V |
| C22 | 1-136-157-00 | FILM | 0.022uF | 5% | 50V |
| C23 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C28 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C31 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C32 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C72 | 1-124-499-11 | ELECT, NONPOLAR | R 1uF | 20% | 50V |

< JACK >

| | | |
|--------|--------------|---------------------------|
| *CNJ31 | 1-580-782-11 | CONNECTOR, BOARD TO BOARD |
| *CNJ72 | 1-580-411-11 | SOCKET, CONNECTOR 4P |

< CONNECTOR >

| | | |
|--------|--------------|--------------------------------|
| *CNP32 | 1-580-772-11 | PIN, CONNECTOR (PC BOARD) 4P |
| *CNP71 | 1-564-719-11 | PIN, CONNECTOR (SMALL TYPE) 3P |

< IC >

| | | | |
|------|--------------|----|-----------|
| IC31 | 8-759-106-02 | IC | uPC4570G2 |
|------|--------------|----|-----------|

< JUMPER RESISTOR >

| | | | | | |
|------|--------------|------------|---|----|-------|
| JW1 | 1-216-295-00 | METAL CHIP | 0 | 5% | 1/10W |
| JW51 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW52 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW53 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |
| JW54 | 1-216-296-00 | METAL CHIP | 0 | 5% | 1/8W |

< TRANSISTOR >

| | | | |
|-----|--------------|------------|---------|
| Q71 | 8-729-602-36 | TRANSISTOR | 2SA1602 |
|-----|--------------|------------|---------|

< RESISTOR >

| | | | | | |
|-----|--------------|-------------|------|----|-------|
| R11 | 1-216-099-00 | METAL CHIP | 120K | 5% | 1/10W |
| R12 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W |
| R13 | 1-216-100-00 | METAL GLAZE | 130K | 5% | 1/10W |
| R14 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W |
| R21 | 1-216-099-00 | METAL CHIP | 120K | 5% | 1/10W |

MD-HX

PANEL

| Ref. No. | Part No. | Description | Remark | | |
|-----------------------|--------------|--------------------------------|--------|-----|-------|
| R55 | 1-216-309-00 | METAL CHIP | 5.6 | 5% | 1/10W |
| R57 | 1-216-298-00 | METAL CHIP | 2.2 | 5% | 1/10W |
| R71 | 1-216-082-00 | METAL GLAZE | 24K | 5% | 1/10W |
| R72 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R73 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W |
| R74 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W |
| R81 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R82 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W |
| R83 | 1-216-001-00 | METAL CHIP | 10 | 5% | 1/10W |
| R84 | 1-216-101-00 | METAL CHIP | 150K | 5% | 1/10W |
| R85 | 1-216-075-00 | METAL CHIP | 12K | 5% | 1/10W |
| R91 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R92 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W |
| R93 | 1-216-001-00 | METAL CHIP | 10 | 5% | 1/10W |
| R94 | 1-216-101-00 | METAL CHIP | 150K | 5% | 1/10W |
| R95 | 1-216-075-00 | METAL CHIP | 12K | 5% | 1/10W |
| < VARIABLE RESISTOR > | | | | | |
| RV11 | 1-241-627-11 | RES, ADJ, CARBON 1K | | | |
| RV21 | 1-241-627-11 | RES, ADJ, CARBON 1K | | | |
| RV71 | 1-241-630-11 | RES, ADJ, CARBON 10K | | | |
| RV72 | 1-241-630-11 | RES, ADJ, CARBON 10K | | | |
| RV81 | 1-241-122-11 | RES, ADJ, CARBON 22K | | | |
| RV91 | 1-241-122-11 | RES, ADJ, CARBON 22K | | | |
| < RELAY > | | | | | |
| RY31 | 1-515-726-11 | RELAY | | | |
| < TRANSFORMER > | | | | | |
| T51 | 1-406-417-11 | COIL, BIAS OSCILLATION | | | |
| T81 | 1-433-381-11 | TRANSFORMER, BIAS OSCILLATOR | | | |
| T91 | 1-433-381-11 | TRANSFORMER, BIAS OSCILLATOR | | | |
| < TEST PIN > | | | | | |
| *TP81 | 1-568-449-11 | HOUSING, CONNECTOR(PC BOARD)3P | | | |
| ***** | | | | | |
| * | A-2006-797-A | PANEL BOARD, COMPLETE | | | |
| ***** | | | | | |
| * | 3-362-478-21 | HOLDER (T), LED | | | |
| * | 4-921-941-01 | CUSHION (FL) | | | |
| * | 4-933-646-01 | HOLDER (TC), FL TUBE | | | |
| < CAPACITOR > | | | | | |
| C406 | 1-162-292-31 | CERAMIC | 680PF | 10% | 50V |
| C407 | 1-162-292-31 | CERAMIC | 680PF | 10% | 50V |
| C408 | 1-162-292-31 | CERAMIC | 680PF | 10% | 50V |
| C901 | 1-161-379-00 | CERAMIC | 0.01uF | 20% | 25V |

| Ref. No. | Part No. | Description | Remark | | |
|----------------|--------------|--------------------------------|------------------------|-----|------|
| C902 | 1-161-379-00 | CERAMIC | 0.01uF | 20% | 25V |
| < CONNECTOR > | | | | | |
| *CN901 | 1-568-836-11 | SOCKET, CONNECTOR 17P | | | |
| < DIODE > | | | | | |
| D901 | 8-719-301-38 | LED | SEL2210S-C (C FADE) | | |
| D902 | 8-719-301-38 | LED | SEL2210S-C (FADE) | | |
| D903 | 8-719-301-38 | LED | SEL2210S-C (EDIT) | | |
| D904 | 8-719-301-38 | LED | SEL2210S-C (REC LEVEL) | | |
| D906 | 8-719-987-63 | DIODE | 1N4148M | | |
| < FILTER > | | | | | |
| FL901 | 1-519-741-11 | INDICATOR TUBE, FLUORESCENT | | | |
| < IC > | | | | | |
| IC901 | 8-759-321-92 | IC | HD614022S | | |
| < TRANSISTOR > | | | | | |
| Q901 | 8-729-900-61 | TRANSISTOR | DTA114ES | | |
| < RESISTOR > | | | | | |
| R401 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R402 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R403 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R901 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R902 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R904 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R905 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R906 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R907 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R909 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R910 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R911 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R912 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R927 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R928 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R929 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R930 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R931 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R932 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| < SWITCH > | | | | | |
| S901 | 1-554-303-21 | SWITCH, TACTILE (HIGH SPEED) | | | |
| S902 | 1-554-303-21 | SWITCH, TACTILE (NORMAL SPEED) | | | |
| S905 | 1-554-303-21 | SWITCH, TACTILE (RESET) | | | |
| S906 | 1-554-303-21 | SWITCH, TACTILE (MEMORY) | | | |
| S907 | 1-554-303-21 | SWITCH, TACTILE (A/B) | | | |

PANEL

REC VOL

SW-A

SW-B

| Ref. No. | Part No. | Description | Remark |
|-----------------------|--------------|------------------------------------|--------|
| S909 | 1-554-303-21 | SWITCH, TACTILE (C FADE) | |
| S910 | 1-554-303-21 | SWITCH, TACTILE (FADE) | |
| S911 | 1-554-303-21 | SWITCH, TACTILE (EDIT) | |
| S912 | 1-554-303-21 | SWITCH, TACTILE (TIME) | |
| < VIBRATOR > | | | |
| X901 | 1-567-775-11 | VIBRATOR, CERAMIC 4.19MHz | |
| ***** | | | |
| * | 1-643-528-11 | REC VOL BOARD | |
| ***** | | | |
| < CAPACITOR > | | | |
| C814 | 1-164-159-11 | CERAMIC 0.1uF | 50V |
| < CONNECTOR > | | | |
| *CN508 | 1-568-832-11 | SOCKET, CONNECTOR 13P | |
| < DIODE > | | | |
| D805 | 8-719-987-63 | DIODE 1N4148M | |
| D806 | 8-719-987-63 | DIODE 1N4148M | |
| < IC > | | | |
| IC806 | 8-759-820-62 | IC LB1639 | |
| < TRANSISTOR > | | | |
| Q807 | 8-729-900-65 | TRANSISTOR DTA144ES | |
| Q808 | 8-729-900-89 | TRANSISTOR DTC144ES | |
| < RESISTOR > | | | |
| R125 | 1-249-435-11 | CARBON 33K 5% 1/4W | |
| R225 | 1-249-435-11 | CARBON 33K 5% 1/4W | |
| R832 | 1-249-412-11 | CARBON 390 5% 1/4W | |
| R833 | 1-249-411-11 | CARBON 330 5% 1/4W | |
| < VARIABLE RESISTOR > | | | |
| RV301 | 1-241-891-11 | RES, VAR, CARBON 20KX3 (REC REVEL) | |
| ***** | | | |
| * | 1-634-841-14 | SW-A BOARD | |
| ***** | | | |
| | 3-343-419-01 | HOLDER (S SENSER A) | |
| < CONNECTOR > | | | |
| *CNP81 | 1-568-852-11 | SOCKET, CONNECTOR 9P | |

| Ref. No. | Part No. | Description | Remark |
|---------------|--------------|-------------------------------|--------|
| < IC > | | | |
| IC81 | 8-719-710-03 | DIODE NJL5165K-B | |
| < RESISTOR > | | | |
| R84 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R85 | 1-249-408-11 | CARBON 180 5% 1/4W | |
| < SWITCH > | | | |
| S81 | 1-571-958-11 | SWITCH, PUSH (1 KEY) (STOP) | |
| S82 | 1-571-281-21 | SWITCH, LEAF (70EQ) | |
| S86 | 1-571-281-21 | SWITCH, LEAF (HALF) | |
| ***** | | | |
| * | 1-634-841-14 | SW-B BOARD | |
| ***** | | | |
| | 3-343-419-01 | HOLDER (S SENSER A) | |
| < CONNECTOR > | | | |
| *CNP81 | 1-568-852-11 | SOCKET, CONNECTOR 9P | |
| < IC > | | | |
| IC81 | 8-719-710-03 | DIODE NJL5165K-B | |
| < RESISTOR > | | | |
| R81 | 1-249-414-11 | CARBON 560 5% 1/4W | |
| R82 | 1-247-818-11 | CARBON 300 5% 1/4W | |
| R83 | 1-247-834-11 | CARBON 1.3K 5% 1/4W | |
| R84 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R85 | 1-249-408-11 | CARBON 180 5% 1/4W | |
| < SWITCH > | | | |
| S81 | 1-571-958-11 | SWITCH, PUSH (1 KEY) (STOP) | |
| S82 | 1-571-281-21 | SWITCH, LEAF (70EQ) | |
| S83 | 1-571-281-21 | SWITCH, LEAF (METAL) | |
| S84 | 1-571-281-21 | SWITCH, LEAF (REC A) | |
| S85 | 1-571-281-21 | SWITCH, LEAF (REC B) | |
| S86 | 1-571-281-21 | SWITCH, LEAF (HALF) | |
| ***** | | | |
| MISCELLANEOUS | | | |
| ***** | | | |
| * 5 | 1-574-726-11 | WIRE, FLAT TYPE (13 CORE) | |
| 6 | 1-690-907-11 | WIRE (FLAT TYPE) (17 CORE) | |
| 69 | 1-690-906-11 | WIRE (FLAT TYPE) (9 CORE) | |
| * 120 | 1-634-841-14 | SW-A BOARD (DECK A) | |
| * 120 | 1-634-841-14 | SW-B BOARD (DECK B) | |
| HP901 | A-2003-837-A | BASE ASSY, HEAD (PB) (DECK A) | |

| Ref. No. | Part No. | Description | Remark |
|----------|---------------------|---|--------|
| | HRPE901A-2003-838-A | BASE ASSY, HEAD (PB/REC/ERASE) (DECK B) | |
| M901A | X-3359-417-1 | MOTOR ASSY (CAPSTAN) (DECK A) | |
| M901B | X-3359-417-1 | MOTOR ASSY (CAPSTAN) (DECK B) | |
| M902A | X-3363-501-1 | MOTOR ASSY (REEL) (DECK A) | |
| M902B | X-3363-501-1 | MOTOR ASSY (REEL) (DECK B) | |

ACCESSORIES & PACKING MATERIALS

* 3-350-154-01 CUSHION
 * 3-704-350-01 SHEET (STANDARD), PROTECTION

HARDWARE LIST

| | | |
|----|--------------|---------------------------|
| #1 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S |
| #2 | 7-621-773-93 | SCREW (PANEL 2.6 TP2) |
| #3 | 7-685-645-79 | SCREW +BVTP 3X6 TYPE2 N-S |
| #4 | 7-621-775-00 | SCREW +B 2.6X3 |
| #5 | 7-627-556-08 | SCREW +P 2.6X2.8 |